UNIVERSITY of MANITOBA

WINNIPEG



Arts and Science Calendar Including Pharmacy

Session 1937-1938



\$ 20°

CALENDAR

University of Manitoba

WINNIPEG

ESTABLISHED 1877

THE PROVINCIAL UNIVERSITY
OF MANITOBA

ARTS AND SCIENCE INCLUDING PHARMACY 1937-1938

WINNIPEG
The Wallingford Press Ltd.
1937

CALENDAR

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TABLE OF CONTENTS

| | PAGE |
|--|-----------|
| Academic Dress | 146 |
| Administrative Officers | 16 |
| Affiliated Colleges | 11 |
| Aikins Scholarships | 129 |
| Almanac | 6 |
| Alumni Association | 168 |
| Alumni Loan Fund | 137 |
| Appeals | 125 |
| Arts Curricula | 27 |
| Astronomy | 86 |
| Attendance Regulations | 125 |
| Bachelor of Arts, Requirements | 27 |
| Bachelor of Science, Requirements | 38 |
| Biblical Literature | 99 |
| Biblical Literature B'nai B'rith Scholarships | 130 |
| Botany | 51 |
| Canadian Federation of | |
| University Women Scholarship | 139 |
| Canadian Officers' Training Corps | 166 |
| Chemistry | 54 |
| Chown, Charles Gray Loan Fund | 137 |
| Correspondence Courses in Arts | |
| Curricula in Arts | 27 |
| Curricula in Science | 38 |
| Degrees Granted, 1936-37 | 158 |
| Delta Phi Epsilon Bursary | 130 |
| Drawing | 64 |
| Economics | 93 |
| 1851 Exhibition Scholarship | 141 |
| English | 65 |
| Equivalent Examinations | 125 |
| Ethics | 88 |
| Examination Regulations | 120 17 |
| Faculty Personnel | |
| Faculty Council (General) Faculty Council (Arts and Science) | 24 |
| Faculty Council (Arts and Science) | 23 |
| French | 151 70 |
| French Government Bursary | 139 |
| Geology and Mineralogy | 72 |
| German German | 75 |
| German-Canadian League Scholarship | 136 |
| Governors, Board of | 13 |
| Greek | 57 |
| Harris Scholarships | |
| Hart Scholarship | 130 |
| Hebrew | 102 |
| Hellenistic Greek | 103 |
| ALCANDAD GI COIL | 100 |

| | PAGE |
|--|----------|
| Historical Sketch | 9 |
| History | 77 |
| Icelandic | 105 |
| I.O.D.E. Post-graduate Scholarship | 140 |
| Isbister Scholarships127, 134 | , 135 |
| Kennedy Prize in Geology | 138 |
| Khaki University Bursaries | 130 |
| Latin | 59 |
| Latin Philosophy Location of Instruction | 106 |
| Location of Instruction | 24 |
| Libraries | 163 |
| Manitoba Union | 149 |
| Mathematics and Astronomy | 80 |
| Master of Arts | 35 |
| Master of Science | 45 |
| Matriculation Requirements | 25 |
| Matriculation Scholarships | 134 |
| Medals | 144 |
| N.F.C.U.S. Studentships | |
| Philosophy Pharmacy | 87 |
| | 114 |
| Physics | 90 |
| Political Economy | 93 |
| Political Science | 93 |
| Professores Emeriti | 21 88 |
| Psychology | 154 |
| Registration | 120 |
| Religious Education | 106 |
| Rhodes Scholarship | 141 |
| Richardson Scholarships | 133 |
| Scholastic Philosophy | 89 |
| Science Curricula | 38 |
| Scientific Club's Prize | 140 |
| Sellers Scholarships | 132 |
| Senate of the University | 14 |
| Social Work Studies | 119 |
| Sociology | 95 |
| Student Organizations | 169 |
| Summary of Registration, 1936-1937 | |
| Supplemental Examinations12 | 1-124 |
| Term Work Credit | 191 |
| Time Tables, 1937-1938 | 48-50 |
| Travelling Fellowships | 138 |
| University Book Department | 150 |
| University Foundation | 165 |
| University Women's Club Loan Fund | 137 |
| Zoology | 97 |
| | |

In the numbering of Courses of Instruction throughout this Calendar, except where it is otherwise explicitly stated in a footnote, the assignment of an odd number indicates that the course is given during the first term of the annual session, that of an even number that it is given during the second term, the assignment of a double number, odd and even, that it is given throughout both terms of the session.

It is to be distinctly understood that the regulations regarding courses of study, examinations, fees, etc., contained in this Calendar are intended for the current year only. Nor does the University hold itself bound to adhere absolutely to the curriculum and conditions laid down herein.

UNIVERSITY ALMANAC, 1937-1938

1937

- May 20—Special session of Manitoba Summer School in the Pre-Medical Sciences Chemistry and Physics begins at the University, Broadway.
- July 2—Registration for Summer School courses and payment of fees at the University of Manitoba, Fort Garry.
 - 5—General session of the Manitoba Summer School begins, Fort Garry.
- Aug. 1—Last day for receipt of applications for September supplemental examinations in Arts and Science, Engineering and Architecture, Agriculture and Home Economics, Pharmacy and Medicine.
 - 23—Applications for admission to the Faculty of Medicine from students presenting credits from other Universities should be filed with the Registrar by this date.
 - 31—Applications for admission to the Faculty of Arts and Science from students entering from High Schools, together with their credentials, should be filed with the Registrar by this date.
- Sept. 1—Registration of Second Year students in Engineering for Survey School at the University, Fort Garry.
 Survey School in Engineering begins.
 Supplemental examinations in Arts and Science, and Pharmacy, begin at the University, Broadway, and in Agriculture and Home Economics at Fort Garry.
 - 1-14—Registration of Junior Division students in Arts and Science, and Pharmacy students at the University, Broadway.
 - 1-18—Registration of Senior Division students in Arts and Science at the University, Broadway and at Fort Garry.
 - 9—Supplemental and special examinations in Medicine begin.
 - 10—Registration in Law at Manitoba Law School and the University, Broadway, and payment of fees begin.
 - 11—Registration in Law closes at 12 o'clock noon. Last day for payment without late entrance fee of fees in Law.
 - 13—Lectures in Law begin at Manitoba Law School.
 - 13-14—Final days for registration and for payment of fees without late entrance fee by Junior Division students in Arts and Science and by Pharmacy students at the University, Broadway.
 - 15—Final day for Registration and for payment of fees without late entrance fee in First Year in Education at Fort Garry.

Junior Division classes in Arts and Science begin at the University, Broadway.

Pharmacy classes begin at the University, Broadway.

- 16—Classes begin in Education.

 Registration in Medicine and payment of fees begin.
- 15-16—Final days for Registration in the Junior Division in Agriculture and Home Economics at the University, Fort Garry, and for payment of fees without late entrance fee.
- Sept. 17—Classes in the Junior Division in Agriculture and Home Economics begin at the University, Fort Garry.
 - 18—Registration in Medicine closes at 12 o'clock noon. Last day for payment without late entrance fee of fees in Medicine.
 - 20—Last day for registration and for payment of fees without late entrance fee by Senior Division students in Agriculture and Home Economics at the University, Fort Garry. Lectures in Medicine begin.
 - 21—Lectures begin in Senior Division in Agriculture and Home Economics at the University, Fort Garry.
 - 20-21—Final days for registration and for payment of fees without late entrance fee by Senior Division students in Arts and Science, at Fort Garry.
 - 22—Senior Division classes in Arts and Science begin at the University, Fort Garry.
 - 29—Registration in Engineering and Architecture and payment of fees begin.
- Oct. 4—Classes in Engineering and Architecture begin.

Last day for payment of fees in Engineering and Architure without late entrance fee.

- 8—Registration in Engineering and Architecture closes.
- 8—Inter-Faculty Track Meet in the afternoon. No classes after 12 noon.
- 9—Registration in Arts and Science closes. Last day for changes and adjustments in courses.
- 11—Thanksgiving Day. No classes.
- 22-University Day. Address in the evening.
- Nov. 1—Registration of Diploma students in Agriculture and payment of fees.
 - 2—Lectures begin for Diploma students in Agriculture.
 - 11-Remembrance Day. No classes.
 - 22—Last day for filing applications for first term or year (December and April) supplemental examinations in Arts and Science.
- Dec. 10—Lectures of First Term close in Arts and Science and Pharmacy and in Engineering and Architecture.
 - 11—Lectures of First Term close in Engineering and Architecture and in Agriculture and Home Economics.

13—First Term examinations for Degree Students in Agriculture and for Home Economics students begin.

First Term examinations in Arts and Science and Pharmacy begin.

First Term examinations in Engineering and Architecture begin.

- 17—Lectures of First Term in Law close.
- 22-Lectures of First Term in Medicine close.

1938

- Jan. 4—Lectures resumed in all Faculties.
 Payment of Second Term tuition fees.
 - 17—First Term examinations in Diploma Course in Agriculture begin.
 - 24—Second Term lectures in Diploma Course in Agriculture begin.
- Mar. 21—Second Term examinations in Diploma Course in Agriculture begin.

 Last day for filing applications for April supplemental examinations where such are authorized.
 - 25—Formal closing of Diploma Course in Agriculture.
- Apr. 8—Lectures close in Law.
 Lectures close in Arts and Science and Pharmacy.
 - 15—Last day for receiving applications for admission to the First Year in Medicine for the session 1938-1939.
 Lectures close in Engineering and Architecture and in Agriculture and Home Economics.
 - 18—Examinations begin in Arts and Science, Pharmacy, Law and Engineering and Architecture. Theoretical examinations of Fifth Year in Medicine begin. Examinations begin in Degree Course in Agriculture and in Home Economics.
- May 16—Examinations in Medicine, First, Second, Third and Fourth Years, begin.
 - 18—Annual Convocation for conferring of degrees.

THE UNIVERSITY OF MANITOBA

HISTORICAL SKETCH

The University of Manitoba was established by Act of the Manitoba Legislature in 1877 "for the purpose (as the preamble states) of raising the standard of higher education in the Province and of enabling all denominations and classes to obtain academic degrees." The government of the University was vested in a Chancellor, a Vice-Chancellor and a University Council, with powers as a "body politic and corporate" to receive, hold and sell property, to arrange courses of study, to hold examinations and to grant degrees. The Act provided for the affiliation of Colleges and for the granting of degrees in Divinity by those Colleges to students who should have obtained recognized academic standing in Arts subjects. The Chancellor was to be appointed by the Lieutenant-Governor-in-Council, and the University Council was to consist of seven representatives from each of the affiliated Colleges, three from Convocation and two from the Board of Education of the Province.

The three Colleges already in existence in Manitoba were affiliated with the University at its inception. St. John's, the Anglican institution, had been reorganized in 1866 by Bishop (afterwards Archbishop) Machray, who became in 1877 the first Chancellor of the University. St. Boniface had grown from a mission school early in the century to be the chief Roman Catholic College of the West. Manitoba College, in connection with the Presbyterian Church, had been organized in 1871. The Vice-Chancellor of the new University was the Hon. Joseph Royal; the Bursar was Mr. Duncan Macarthur; and the Registrar Mr. E. W. Jarvis.

Since 1877 five Colleges have been received into affiliation with the University. The Manitoba Medical College was affiliated in 1882, Wesley College was affiliated in 1888, the Manitoba College of Pharmacy in 1902, the Manitoba Agricultural College in 1907, and St. Paul's College in 1931.

In 1885 an agreement between the Dominion Government and the Province of Manitoba provided for an endowment not exceeding 150,000 acres of land for the University of Manitoba "for its maintenance as a University capable of giving proper training in the higher branches of education."

In 1900 an amendment to the University Act gave the University "power to give instruction and teaching in the several faculties and different branches of knowledge as may from time to time be directed by the Council of the University." The present site was granted by the Dominion Government, and the corner-stone was laid in 1900 by the Duke of Cornwall and York, the late King George V. Four new chairs in the Natural and Physical Sciences were founded in 1904, and as well one in Mathematics and one in the combined subjects of Histology, Pathology and Bacteriology. The number of Science chairs was subsequently increased to six; Geology and Mineralology, which at the first was combined in part with Botany and in part with Physics, being given independent status, and as well Zoology, which at first was attached to Physiology. A department of Civil Engineering was organized in 1907, and Departments of Electrical Engineering, Political Economy, English and History in 1909. Departments of Architecture, of French and of

German were created in 1913, and began their work in the fall of that year. In the fall of 1914 the following new departments were instituted: A department of Pharmacy, which took over the teaching in this subject formerly done by the Manitoba College of Pharmacy; a department of Mechanical Engineering; a department of Classics. In addition, the work of the departments of English, French, German, History and Political Economy, which had hitherto been confined to the subjects of the Third and Fourth Years in Arts, was extended to include those of the First and Second Years and the department of Mathematics, which had hitherto covered only the Second, Third and Fourth Years, assumed responsibility for the work of the First Year as well. The University thus came into the position of offering for the first time through its own faculty the full work of the course in Arts for the B.A. degree.

The affiliation of Manitoba Agricultural College with the University was terminated by an Act of the Provincial Legislature in 1912 but restored again in 1916.

The first President of the University, Dr. James A. MacLean,

assumed office on January 1st, 1913.

By the University Amendment Act, 1917, there was introduced into the corporation a Board of Governors of nine members, appointed by the Lieutenant-Governor-in-Council for a period of three years, three retiring each year, and in this Board was vested "the government, conduct, management and control of the University," including its lands, investments, appointments, limits of instruction, etc. The Council of the University was continued, but with a reduction in the number of its members from seventy-two to twenty-eight and a limitation of the sphere of its activity to that of "general charge of the academic work of the University," within which range it is still subject to the plenary power vested in the Board of Governors. Its representative character was maintained as is shown by the following composition: The Chancellor, the President, four representatives from the faculty of the Univerity, two representatives from Manitoba Agricultural College, one representative from Manitoba Medical College, one representative from the College of Physicians and Surgeons of Manitoba, six members to be appointed by the Lieutenant-Governor-in-Council, four representatives to be elected by convocation and two representatives from each of the affiliated Arts Colleges, St. Boniface, St. John's, Manitoba and Wesley. Definite legislative recognition is given by the practice of the submission annually to the Lieutenant-Governorin-Council through the Minister of Education of a budget of "anticipated revenues and proposed expenditures" and of the appropriation by the Legislature of money for University expenditures.

During the session 1919-1920, an agreement was reached with the Faculty of Manitoba Medical College whereby that institution passed out of existence upon the assumption by the University of responsibility for the maintenance of medical teaching in an adequate manner. In pursuance of this arrangement a full Medical Faculty was appointed and a faculty organization completed.

Provision was also made for the teaching by the University of philosophy, including metaphysics, ethics and psychology, and a chair of Philosophy and Psychology was established.

The Board of Governors completed a reorganization of the University Faculty which became effective on June 1st, 1921. Three faculties were established, viz., the Faculty of Arts and Science,

the Faculty of Engineering and Architecture, and the Faculty of Medicine, with a Dean of each Faculty. A General Faculty Council

was also instituted.

On March 1st, 1924, by Act of the Manitoba Legislature, the administration of Manitoba Agricultural College was transferred to the Board of Governors of the University and it was arranged that in future the instructional work of the College should be carried on as a Faculty of Agriculture of the University, provision being made at the same time for the appointment of an Advisory Council for the purpose of relating the work in Agriculture to the needs of the people. This Advisory Council was abolished in 1933.

In November, 1929, the Legislature selected the site in Fort Garry, already occupied by the Manitoba Agricultural College since 1913, as the permanent site of the University. An Arts Building to accommodate Senior Division students was erected thereon during 1930-1931, and a Science Building during 1931-32. The Fort Garry site was first occupied jointly by students of Agriculture and Home Economics and by students of the Senior Division in Arts and Science and post-graduate students during the session 1932-33. At the opening of the session 1933-1934 the work of the Second, Third and Fourth Years in Engineering was transferred to the Fort Garry site.

In 1933 an amendment to the University Act gave the Alumni three representatives on the Board of Governors, elected for a three-year term, one retiring each year. It also provided for the annual election of the Chancellor by the graduates and gave the Chancellor and the President membership on the Board.

In 1934 President MacLean retired after twenty-one years' service, and was succeeded by President Sidney E. Smith.

In 1936 the legislation affecting the University was thoroughly revised by the passage of the University of Manitoba Act, 1936. A Senate of thirty-six members replaces the former University Council.

COLLEGES AFFILIATED WITH THE UNIVERSITY

St. Boniface College, St. Boniface, in connection with the Roman Catholic Church. Rector—Rev. Joseph Béliveau, S.J., B.A., St. Boniface College.

St. John's College, Winnipeg, in connection with the Church of England. Warden—Rev. W. F. Barfoot, M.A., St. John's College. *Manitoba College, Winnipeg, in connection with the United Church of Canada. Principal—Rev. John MacKay, M.A., D.D., Manitoba College.

*Wesley College, Winnipeg, in connection with the United Church of Canada. President—Rev. J. H. Riddell, B.A., D.D., LL.D.,

Wesley College.

Manitoba Law School, Winnipeg. Chairman of Trustees-Hon. H. A.

Robson, K.C., LL.D., Law Courts.

St. Paul's College, Winnipeg, in connection with the Roman Catholic Church. Rector—Rev. John S. Holland, S.J., B.A., St. Paul's College.

^{*}While Manitoba College and Wesley College still retain their separate charters and separate Boards of Directors, they are at present administered by a Joint Executive Committee and have a Joint Arts Faculty, a Joint Theological Faculty and a Matriculation Department and carry on their work under the name of United Colleges.

Chairman of Board of Governors Hon. Andrew K. Dysart, M.A., LL.D.

Chancellor

John W. Dafoe, LL.D.

President and Vice-Chancellor Sidney E. Smith, M.A., LL.B.

Registrar
W. J. Spence, B.A., LL.D.

Assistant Registrar
W. B. H. TEAKLES, B.A.

Comptroller
F. W. CRAWFORD

Assistant Comptroller
C. G. FIELDHOUSE

BOARD OF GOVERNORS, 1936-1937

Chairman Hon. A. K. Dysart, M.A., LL.D.

> Vice-Chairman H. A. BERGMAN, K.C.

> > Secretary F. W. CRAWFORD

Appointed for a three-year term ending May 31st, 1939:

HON. A. K. DYSART, M.A., LL.D. FRANK W. NICKS, ESQ.* ARTHUR A. TISDALE, ESQ.

Appointed for a three-year term ending May 31st, 1938:

HJALMAR A. BERGMAN, K.C. PAUL F. BREDT, B.S.A. LOUIS D. COLLIN, B.L., M.D.;

Appointed September 10th, 1936, for a term ending May 31st, 1938: JAMES PRENDERGAST, B.A., M.D.

Appointed for a three-year term ending May 31st, 1937:

MRS. MARY SPEECHLY, M.A.

CHRISTOPHER A. ADAMSON, M.A.

WILLIAM J. PARKER, B.S.A.

Elected by the Alumni for a three-year term ending May 31st, 1939: DAVID A. STEWART, B.A., M.D., LL.D.‡

Elected by the Alumni for a three-year term ending May 31st, 1938: Frank D. MacCharles, B. A.

Elected by the Alumni for a three-year term ending May 31st, 1937: EDWARD B. PITBLADO, B.A., LL.B.

Members ex officio:

JOHN W. DAFOE, LL.D., Chancellor. SIDNEY E. SMITH, M.A., LL.B., President.

^{*} Resigned, December 31st, 1936

[†] Resigned, September 10th, 1936.

[‡] Deceased, February 16th, 1937.

SENATE OF THE UNIVERSITY, 1936-1937

Vice-Chancellor President Sidney E. Smith
Chancellor John W. Dafoe, LL.D.

Dr. Robert Fletcher, Deputy Minister of Education.

Mr. WILFRED SADLER, Chairman, Advisory Board, Department of Education.

DEAN WM. TIER, Faculty of Arts and Science.

DEAN A. T. MATHERS, Faculty of Medicine.

DEAN E. P. FETHERSTONHAUGH, Faculty of Engineering and Architecture.

DEAN ALFRED SAVAGE, Faculty of Agriculture and Home Economics.

DEAN D. S. Woods, Faculty of Education.

DEAN T. W. LAIDLAW, Manitoba Law School.

Professor N. R. Wilson and Professor R. McQueen, representing the Professors of the University in Arts.

Professor H. P. Armes and Professor J. F. T. Young, representing the Professors of the University in Science.

Professor H. E. Bletcher, representing the Professors of the University in Pharmacy.

Professor A. T. Cameron and Professor Ross B. Mitchell, representing the Professors of the University in Medicine.

Professor N. M. Hall and Professor G. H. Herriot, representing the Professors of the University in Engineering.

Professor M. S. Osborne, representing the Professors of the University in Architecture.

Professor G. P. McRostie* and Professor A. V. Mitchener, representing the Professors of the University in Agriculture.

Dr. Grace Gordon Hood, representing the Professors of the University in Home Economics.

Professor R. C. Lodge, representing the Professors of the University in Education.

Rev. Joseph Beliveau, S.J., and Rev. Dr. Henri Bourque, S.J., representing St. Boniface College.

Rev. Warden W. F. Barfoot, and Mr. E. K. Williams, K.C., representing St. John's College.

Rev. Dr. John MacKay and Rev. Dr. A. B. Baird, representing Manitoba College.

REV. DR. J. H. RIDDELL and MR. J. K. SPARLING, K. C., representing Wesley College.

REV. J. S. HOLLAND, S.J., and Dr. James McKenty, representing St. Paul's College.

Dr. William Turnbull, representing the College of Physicians and Surgeons of Manitoba.

Mr. Reginald Hugo, President of the University of Manitoba Alumni Association.

Dr. W. J. Spence, Registrar, Secretary of Senate.

^{*}Professor McRostie resigned as from January 1st, 1937, and his place was taken by Associate Professor J. M. Brown.

STANDING COMMITTEES OF THE UNIVERSITY SENATE, 1936-1937

Committee on Arts and Science Studies: The Vice-Chancellor (Chairman), Dean William Tier, Rev. Joseph Beliveau, S.J., Rev. Dr. J. H. Riddell, Rev. J. S. Holland, S.J., Professor N. R. Wilson, Professor R. McQueen, Professor H. P. Armes, Professor J. F. T. Young, Dr. Robert Fletcher, Dr. W. J. Spence, Mr. W. B. H. Teakles, (Secretary).

Committee on Khaki University Bursaries: Dean E. P. Fetherstonhaugh (Chairman), the Vice-Chancellor, Assistant Professor R. F. Argue, Professor N. R. Wilson, Colonel Royal Burritt, Mrs. U. N. Macdonnell, Mr. A. S. Cummings, Dr. W. J. Spence, Professor H. P. Armes (Secretary).

Committee on University Travelling Fellowships: Dean William Tier (Chairman), the Vice-Chancellor, Professor R. C. Lodge, Professor J. F. T. Young, Dr. L. S. Macklin, Mr. Reginald Hugo, Dean E. P. Fetherstonhaugh, Professor R. McQueen, Mr. J. K. Sparling, Dr. W. J. Spence (Secretary).

Representatives on the Manitoba High School Examination Board: Dean William Tier, Dean D. S. Woods, Dr. W. J. Spence, Mr. W. B. H. Teakles.

Representatives of Manitoba on The Western Board of Music: Dr. Robert Fletcher, Miss Eva Clare.

Manitoba Board of Musical Studies: Dr. Robert Fletcher (Chairman), Mr. Russell E. Standing, Miss Myrtle Norman Ruttan, Mrs. Ethel M. Lupton, Mr. John Waterhouse, Mr. J. Roberto Wood, Mr. Leonard D. Heaton, Mr. Ronald W. Gibson, Miss Ethel A. Kinley, Mr. H. G. Mingay, Professor W. L. Wright, Dr. W. J. Spence, Mr. W. B. H. Teakles (Secretary).

Representative on the General Council of the University of Manitoba Students' Union: Dr. W. J. Spence.

Representative on the Athletic Board of Control of the University of Manitoba Students' Union: Dean O. T. Anderson.

Representative on the Social Committee of the University of Manitoba Students' Union: Mrs. U. N. Macdonnell.

Representative on the Executive of the Debating Union of the University of Manitoba Students' Union: Professor H. N. Fieldhouse.

Representative on the Executive of the Dramatic Society of the University of Manitoba Students' Union: Professor E. K. Brown.

Representative on the Executive of the Glee Club of the University of Manitoba Students' Union: Assistant Professor A. L. Wheeler.

OFFICERS OF ADMINISTRATION,

1936-1937

| President | SIDNEY E. SMITH, M.A., LL.B. |
|--|----------------------------------|
| Registrar | W. J. SPENCE, B.A., LL.D. |
| Assistant Registrar | W. B. H. TEAKLES, B.A. |
| Comptroller | F. W. CRAWFORD |
| Assistant Comptroller | C. G. FIELDHOUSE |
| Dean of Faculty of Arts and Science | ceW. TIER, M.A. |
| Dean of Faculty of Engineering and Architecture E. I | P. FETHERSTONHAUGH, M.C., B.Sc. |
| Dean of the Faculty of Medicine | A. T. Mathers, M.D., C.M. |
| Secretary of the Faculty of Medicine | A. N. MacLeod, B.A., M.D., C.M. |
| Dean of Faculty of Agriculture and Home Economics | |
| Dean of Faculty of Education | D. S. Woods, M.A., Ph.D. |
| Dean of Women Students Mrs. Ursi | ILLA N. MACDONNELL, M.A., Ph.D. |
| Dean of Junior Women | Doris B. Saunders, M.A., B.Litt. |
| Dean of Junior Men | CLARK R. HOPPER, M.A. |
| Librarian | F. E. NUTTALL, M.A. |
| Librarian, Junior Library | ELIZABETH DAFOE, B.A. |
| Physical Director | R. WRAY YOUMANS |

FACULTY MEMBERS IN ARTS, SCIENCE, PHARMACY, ENGINEERING, ARCHITECTURE, AGRICULTURE, HOME ECONOMICS AND EDUCATION, 1936-1937

| ALLEN, FRANK, M.A. (U.N.B. and Cornell), Ph.D. (Cornell), LL.D. (Man.), F.R.S.C. |
|---|
| Professor of Physics Ste. 12 Rosemount Apts. |
| ALLEN, LILLIAN B., B.A. (Man.) Lecturer in Applied Art |
| Allison, William Talbot, M.A. (Toronto), Ph. D. (Yale) Professor of English 600 Gertrude Ave. |
| Anderson, William Abraham, M.Sc. (Man.), M.A. (Chicago) Assistant Professor of English |
| Argue, Robert Fletcher, M.A. (Man.) Assistant Professor of English 189 Kingston Row |
| ARMES, HENRY P., B.Sc. (Leeds), Ph.D. (Strassburg) Associate Professor of ChemistrySuite C, Milan Apartments |
| Ballu, Celine A., M.A. (Wisconsin) Lecturer in French Manitoba Union |
| Batho, Harold F., B.A. (McMaster), S.M., Ph.D. (Chicago) Lecturer in Physics Ste. 11 B, Bell Rose Aparts. |
| BISBY, GUY RICHARD, B.S. (South Dakota), M.A. (Columbia), Ph.D. (Minnesota)* Assistant Professor of Botany Manitoba Union |
| |
| BLETCHER, HENRY E., B.Sc., Phar. (Man.), F.C.I.C. Professor of Pharmacy and Pharmaceutical Chemistry |
| BRODRICK, FREDRICK WILLIAM, B.S.A. (Toronto) Professor of Horticulture and Forestry 31 Furby St. |
| Brown, E. K., M.A. (Toronto), D. ès Lett. (Paris) Professor of English |
| Brown, James McCulloch, B.S.A. (Toronto), M.S. (Minnesota) Associate Professor of Animal Husbandry124 Buxton Road |
| Brown, Reuben Wesley, B.S.A. (Toronto), M.S. (Iowa State College) Professor of Dairy Husbandry553 Rosedale Ave. |
| Brownell, George McLeod, M.Sc. (Man.), Ph.D. (Minnesota) Assistant Professor of Geology & Mineralogy_819 Somerset Ave. |
| Bürzle, Anton, Ph.D (Munich) Assistant Professor of German University of Manitoba |
| CAMPBELL, ALAN NEWTON, M.Sc. (Lond.), Ph.D. (Lond.), D.Sc. (Aberdeen), F.I.C. Assistant Professor of ChemistrySte. 15, Highworth Aparts. |
| CLARK, FREDERICK WILLIAM, B.A. (Man.), Ph.D. (Chicago) Professor of Latin and Greek196 Elm St. |

^{*} Resigned as from January 1st, 1937.

DELURY, JUSTIN S., B.A. (Toronto), Ph.D. (Minnesota) F.R.S.C.

| Projessor of Geology and Mineralogy900 Grosvenor Ave. |
|---|
| Dorsey, John W., E.E. (Lehigh), A.M.E.I.C. Associate Professor of Electrical Engineering Manitoba Union |
| ELLIS, JOSEPH HENRY, B.S.A. (Man.), M.S. (Minnesota) Associate Professor of Agronomy952 North Drive |
| FETHERSTONHAUGH, EDWARD P., M.C., B.Sc. (McGill), M.E.I.C. Professor of Electrical Engineering801 Dorchester Ave. |
| FIELDHOUSE, H. NOEL, M.A. (Sheffield), M.A. (Oxon.) Professor of HistoryUniversity of Manitoba |
| FORSTER, THEODORE LESLIE, B.S.A. (Man.) Lecturer in Dairying Manitoba Union |
| GOULDEN, CYRIL H., B.S.A., M.S.A. (Saskatchewan), Ph.D. (Minnesota) Honorary Lecturer in Mathematics |
| |
| Grant, Henry Clark, B.S.A., M.A. (Man.), Ph.D. (Stanford) Assistant Professor of Political Economy 815 Oakenwald Ave. |
| GROFF, CLARA LOUISE, B.S. (Columbia) Lecturer in Clothing and Textiles |
| HALL, NORMAN M., O.B.E. (Mil.), B.Sc. (McGill), M.E.I.C., M.A.S.M.E. Professor of Mechanical Engineering 22 Dundurn Place |
| HEINZELMANN, JACOB HAROLD, B.A. (Illinois), Ph.D. (Chicago) Professor of German Language and Literature 880 Grosvenor Ave. |
| Herriot, George H., B.Sc. (Queen's), D. and M.L.S., M.E.I.C. Professor of Civil Engineering 325 Waverley St. |
| HERNER, MILTON CHRISTIAN, B.S.A. (Toronto), M.S. (Cornell) Professor of Poultry Husbandry |
| HIEBERT, PAUL G., B.A. (Man.), M.A. (Toronto), M.Sc., Ph.D. (McGill), F.C.I.C. Assistant Professor of Chemistry 399 Stradbrooke Ave. |
| Hiltz, Mary Catherine, B.S. (Columbia), M.A. (Toronto) Assistant Professor of Foods and NutritionSte. 22B Guelph Aparts. |
| |
| Hood, Grace Gordon, B.Sc., M.A. (Columbia); Ph.D. (Minnesota). Director of Home Economics Courses Ste. 21C Guelph Aparts. |
| Hoogstraten, Jack, B.Sc. (C.E.) (Man.) Lecturer in Civil Engineering 162 Oakwood Ave. |
| Hopper, Clark Reid, B.A., M.A. (Man.) Assistant Professor of English 885 Corydon Ave. |
| Howe, Joseph E., B.A. (Acadia and Yale), M.A. (Acadia) Assistant Professor of History72 Chestnut St. |
| Hugill, William Meredith, B.A. (Toronto), Ph.D. (Chicago) Assistant Professor of Latin and GreekSte. 9, Aynsley Court |
| Jackson, Vincent William, B.A. (Queen's), M.S. (Minnesota) Assistant Professor of Zoology737 McMillan Ave. |
| JAMES, NORMAN, B.S.A. (Toronto), M.S. (Iowa State College) Assistant Professor of Bacteriology336 Kingston Crescent |

JAMIESON, MORLEY CRAIG, B.S.A. (Toronto) Lecturer in Bacteriology... 517 Langside St. Johnson, Skuli, M.A. (Man.) Assistant Professor of Latin and Greek..... _176 Lenore St. Jones, Cyril Meredith, M.A. (Wales) Docteur de l'Université (Paris) Jones, Reginald F., M.A. (Liverpool)

Assistant Professor of Political Economy....1024 Dorchester Ave. LAWSON, JOSEPH WILLIAM, M.A. (Man.) Lecturer in Mathematics Ste. 27, Sparling Apartments LEITH, EDWARD ISAAC, M.Sc. (Man.) Lecturer in Geology.... _15A, Maple Leaf Aparts. Lodge, Rupert C., M.A. (Oxon.)

Professor of Logic and History of Philosophy_ Ste. 2, Royal Oak Court Low, Harry Rattray, M.A., B.Sc., B.Ed. (Glasgow) Assistant Professor of Education Manitoba Union Lowe, Charles W., M.Sc., (Birm.) Assistant Professor of Botany.... 1588 Wolseley Ave. MACDONALD, ALBERT E., M.Sc. (McGill), A.M.E.I.C. 331 Cambridge St. Professor of Civil Engineering.... MACDONALD, PATRICK ANDERSON, M.Sc. (Man.), Ph.D. (Man.) Assistant Professor of Physics_____ ____102 Arlington St. MACFARLANE, RONALD OLIVER, M.A. (Queen's), A.M., Ph.D., (Harvard) Assistant Professor of History 201 Cordova St. McClung, Robert K., M.A. (McGill), B.A. (Cantab.), D.Sc. (McGill), F.R.S.C. Associate Professor of Physics... __88 Chestnut St. McDougall, Dougald, M.Sc. (Man.), F.C.I.C.

Assistant Professor of Pharmacy and Pharmaceutical 279 Inglewood St. McFadden, Eleanor Gertrude, B.S., M.S. (Iowa State College) Lecturer in Clothing and Textiles Ste. 3, Dunedin Court McLauchlin, Florence, B.Sc., H.Ec. (Man.), M.S. (Iowa State College) Lecturer in Child Care and Home Economics.... Manitoba Union McMillan, May, B.Sc. (Mt. Allison), M.A. (Columbia) Lecturer in Foods and Nutrition Manitoba Union McQueen, Robert, M.A. (Alberta) QUEEN, KOBERT, M.A. (Alberta)

Professor of Political Economy 141 Montrose St. McRostie, Gordon Peter, B.S.A. (Toronto), M.S.A., Ph. D. (Cornell) Professor of Agronomy.* MILNE, THESSALON HERBERT, M.A. (Toronto) Assistant Professor of Mathematics 821 Dorchester Ave. MITCHENER, ALVIN VALENTINE, B.A. (McMaster), B.S.A. (Toronto), M.Sc. (Man.) Professor of Entomology_____ 911 Windermere Ave. * Resigned as from January 1st, 1937.

| MOFFATT, ROBERT W., B.A.Sc. (Toronto), A.M.E.I.C. Associate Professor of Civil Engineering900 Jessie Ave. |
|--|
| Moxon, Mary Caroline, Ph.B. (Chicago), M.A. (Man.) Lecturer in Home EconomicsSte. 10, Bradeen Apartments |
| Neave, Ferris, M.Sc. (Manchester) Assistant Professor of Zoology 821 Somerset Ave. |
| OSBORNE, MILTON S., B. Arch. (Ohio State), B.Arch. M.Sc. (Columbia), F.R.A.I.C., M.A.I.A. Professor of Architecture Ste. 8, Alcalde Aparts. |
| OSBORNE, WILLIAM FREDERICK, M.A. (Toronto), Officer d'Académie Professor of French Language and Literature |
| Panton, Lenora Instructor in Institutional Management Manitoba Union |
| PARKER, MATTHEW A., B.Sc. (Glasgow), LL.D., (Man.), F.I.C., F.C.I.C., F.R.S.C. Professor of Chemistry 365 Waverley St. |
| Perry, Aaron Jenkins, M.A. (Acadia and Yale) Professor of English 61 Home St. |
| RICHARD, MARCEL EDMOND JEAN, B.A. (Alta.), Dipl. d'Ec. de Prepar. (Sorbonne). Lecturer in French 1 Roslyn Place |
| RIDDELL, WILLIAM FORREST, M.Sc. (Man.) A.M.E.I.C. Assistant Professor of Civil Engineering 42 Dundurn Place |
| Roberts, Herbert F., B.A., M.Sc (Kansas), F.A.A.S. Assistant Professor of Botany.† |
| ROBINSON, ALLEN DINWOODY, B.A. (Sask.), M.A., Ph.D. (Minnesota) Assistant Professor of Chemistry 1049 Dorchester Ave. |
| RUSSELL, JOHN A., B.Sc. (Arch.) (Mass. Inst. of Tech.), M. Arch., M.A.I.A. Assistant Professor of Architecture |
| SAUNDERS, DORIS BOYCE, M.A. (Man.), B.Litt. (Oxon.) Lecturer in English Ste. 31, Royal Crest Apartments |
| Saunderson, Hugh Hamilton, B.A., M.Sc. (Man.), Ph.D. (McGill) Assistant Professor of Chemistry Manitoba Union |
| SAVAGE, ALFRED, B.S.A. (McGill), D.V.M. (Cornell), M.R.C.V.S. Professor of Bacteriology and Animal Pathology745 Somerset Ave. |
| SCOTT, WALTER M., B.A.Sc., M.E.I.C. Lecturer in Civil Engineering 188 Montrose St. |
| SHANKS, GRAHAM LAWSON, B.S.A. (Man.), M.S. (Iowa State College) Associate Professor of Agricultural Engineering848 North Drive |
| TIER, WILLIAM, M.A. (Toronto) Professor of Mathematics 72 Arlington St. |

[†] Deceased, January 14th, 1937

| Waines, William John, M.A. (Man.) |
|---|
| Assistant Professor of Political Economy (On Leave) |
| Wardle, Robert Arnold, M.Sc. (Manchester), F.R.S.C. Professor of Zoology Ste. 1, 883 Grosvenor Ave. |
| WARREN, LLOYD A. H., M.A. (Queen's), Ph.D. (Chicago), F.R.A.S., A.A.S., F.A.I.A., F.C.A.S. |
| Professor of Mathematics |
| WHEELER, A. LLOYD, B.A. (Brit. Col.), M.A. (Toronto), Ph.D. (Wisconsin) |
| Assistant Professor of English Ste. 14, Debary Apts. |
| WILSON, NORMAN RICHARD, M.A. (Toronto), Ph.D. (Chicago), F.R.S.C. Professor of Mathematics 989 Grosvenor Ave. Wood, Gordon William, B.S.A. (McGill), M.S. (Wisconsin) |
| Wood, Gordon William, B.S.A. (McGill), M.S. (Wisconsin) Professor of Animal Husbandry 293 Ashland Ave. |
| Woods, David Scott, B.A. (Queen's), M.A. (Man.), Ph.D. (Chicago) Professor of Education 360 Kingston Crescent WRIGHT, HENRY WILKES, B.A. (Cornell), Ph.D. (Connell) |
| WRIGHT, HENRY WILKES, B.A. (Cornell), Ph.D. (Cornell) Professor of Psychology 894 Wolseley Ave. |
| VOLING JOHN FRANCIS TORD M A Ph D (Toronto) |
| Young, John Francis Todd, M.A., Ph.D. (Toronto) Associate Professor of Physics 900 McMillan Ave. |
| PROFESSORES EMERITI |
| Buller, A. H. Reginald, B.Sc. (Lond.), Ph.D. (Leipzig), D.Sc. (Birm.), LL.D. (Man.), F.R.S.C., F.R.S. |
| Professor Emeritus of Botanyc/o The Herbarium, Kew Gardens, Surrey, England |
| CLARK, ARCHIBALD BROWN, M.A. (Edin.), LL.D. (Man.), F.S.S. |
| Professor Emeritus of Political Economy 146 Craiglea Drive, Edinburgh, Scot. |
| HARRISON, THOMAS JAMES, B.S.A. (Manitoba), M.S. (Minnesota) Professor Emeritus of Agronomy |
| Lee, Charles Henry, B.A. (Trinity), M.A. (Toronto) Professor Emeritus of Bacteriology |
| Sproule, George Albert, B.A. (Toronto) Professor Emeritus of English.* |
| STOUGHTON, ARTHUR A., Ph.B. (Columbia), M.R.A.I.C., M.S.B.A.A. |
| Professor Emeritus of Architecture Mount Vernon, N.Y. |
| SESSIONAL APPOINTMENTS |
| Allely, J. S. M., B.A. (Queen's), A.M. (Harvard). Interim Lecturer in Political Economy814 Garwood Ave. |
| Interim Lecturer in Political Economy 814 Garwood Ave. |
| CLARK, HART DUNCAN, B.A. (Man.) Fellow in Mathematics 196 Elm St. |
| FIELDHOUSE, IRENE E., B.Sc. (H.Ec.) Instructor in Home Economics 500 Greenwood Pl. |
| Dudley Margaret G. M.Sc. (Man.) Ph. D. (Minn.) |
| Special Lecturer in Botany University of Manitoba Hanna, William F., B.Sc. (Dal.), M.Sc. (Alta.), Ph.D. (Man.) |
| Special Lecturer in Botany |
| Sheps, Louis Jack, B.Sc. (Man.), Ph.D., (McGill) Assistant in Chemistry |
| * Deceased, November 4th, 1936. |

GENERAL FACULTY COUNCIL, 1936-1937

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PRESIDENT SIDNEY E. SMITH

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PROFESSOR D. S. MACKAY
*PROFESSOR I. M. THOMPSON
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PROFESSOR G. L. SHANKS

PROFESSOR G. P. MCROSTIE

PROFESSOR G. R. BISBY

PROFESSOR A. V. MITCHENER

PROFESSOR H. C. GRANT

^{*} As from January 1st, 1937.

[†] Resigned as at January 1st, 1937.

FACULTY COUNCIL OF ARTS AND SCIENCE 1937-1938

DEAN WILLIAM TIER, Chairman PRESIDENT SIDNEY E. SMITH PROFESSOR FRANK ALLEN Professor W. T. Allison Professor H. E. Bletcher PROFESSOR H. E. BLETCHER
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LOCATION OF INSTRUCTION

For the session 1937-38, classes of the Junior Division in Arts and Science (including the Pre-Engineering Year, the Pre-Architecture Year, the two Pre-Medical Years, etc.) and classes of the First Year in Engineering will be given in the Broadway Buildings of the University. The work of the Senior Division in Arts and Science (Third and Fourth Years in the General Course, Third, Fourth and Fifth Years in the Honors Courses and the Post-Graduate Courses) and of the Second, Third and Fourth Years in Engineering and of all years in Architecture will be given at Fort Garry.

There is available in the University Residence at Fort Garry, known as the Manitoba Union, living accommodation for five hundred students. For particulars as to rates and routine of application for admission, see page 149.

Students who reside at their homes or in boarding-houses in Winnipeg find a very satisfactory transportation service by street car available for them from all parts of the city and suburbs to Fort Garry. Street cars leave the corner of Portage Avenue and Main Street every half hour during the day and evening and ample additional service is provided to meet the needs of the morning and afternoon rush periods.

With the recent consolidation of all student activities on the Fort Garry campus under one unified control and a steady growth in the number of students using the facilities provided, the new University site has now become the centre of student life and affairs.

UNIVERSITY OF MANITOBA MATRICULATION

GENERAL REQUIREMENTS

The Matriculation requirements of the University of Manitoba for its courses in Arts and Science are most simply and conveniently stated, for Manitoba students who prepare themselves in the High Schools and Collegiate Institutes of the province, as the completion of the course of study of Grades IX, X, and XI for Matriculation in accordance with the "Programme of Studies for Secondary Schools," authorized by the Advisory Board and published by the Department of Education. They may be briefly summarized as follows:

Required Subjects-

ENGLISH (three years work covering Literature, Composition, Spelling and Grammar).

History (three years work covering World History, British History and Canadian History and Civics).

MATHEMATICS (three years work covering General Mathematics, Algebra and Plane Geometry).

Elective Subjects (either three languages or two languages and two units of science* or one language and four units of science)—

French (three years work covering Grammar, Authors and Composition).

German (three years work covering Grammar, Authors and Composition).

LATIN (three years work covering Grammar, Authors and Composition).

GREEK (three years work covering Grammar, Authors and Composition).

ICELANDIC (three years work covering Grammar, Authors and Composition)—available only in two-language or three-language course.

GENERAL SCIENCE (a one-year course) -one unit.

Biology (a one-year course)—one unit.

Physics (a one-year course) - one unit.

CHEMISTRY (a one-year course) -one unit.

N.B.—A course in Music (involving the attainment of at least Grade VII in Piano or Grade IV in Violin or Grade II in Singing together with at least Grade IV in Theory of the University of Manitoba Music Syllabus) may be substituted for one unit of science* by a student in the two-language or the one-language course. A similar substitution may be made of an approved course in Home Economics or Industrial Arts or Commercial Work. Only one such substitution may be made by an individual candidate.

^{*}The election of science subjects by a two-language student must include either Physics or Chemistry.

MATRICULATION EXAMINATIONS

The examinations for Matriculation (and as well the alternative system of according credit on the recommendation of the staffs of approved Collegiate Institutes) are administered for the University by the Manitoba High School Examination Board on which the Senate of the University is equally represented with the Advisory Board of the Department of Education, which controls the curriculum and standard of work in the secondary schools of the province. These are held twice in each year, in June and in September, and certain supplemental or special examinations are given in December. The September examination is a limited one, ordinarily confined to subjects of the final year of the High School course and is intended for those who desire to qualify immediately to enter upon University studies.

For detailed information regarding Matriculation Examinations, consult the Programme of Studies for Secondary Schools of the Department of Education.

EQUIVALENT EXAMINATIONS FOR ADMISSION

Students desirous of entering upon a course of study at the University of Manitoba and electing to prepare themselves at a High School in one of the other Canadian provinces should adapt themselves fully to the curriculum of studies current in the school which they attend and should plan to meet the requirements for admission of a University in their own province that receives students on a Junior Matriculation standing and having met the requirements of such a University should then seek recognition therefor by the University of Manitoba. In the case of students presenting standing from provincial Departments of Education for direct evaluation, credit will be given only insofar as the requirements of the University of Manitoba are met by parallel subjects and equivalent standards. Saskatchewan applicants should see to it that their Grade XI record, if to be presented for University of Manitoba Matriculation, should include both Algebra and Geometry and at least one of the languages—Latin, Greek, French and German.

CURRICULA IN ARTS

The University of Manitoba confers two degrees in Arts, viz.: Bachelor of Arts (B.A.) and Master of Arts (M.A.). The requirements for those who would proceed in course to these degrees are set forth below.

I—BACHELOR OF ARTS

Matriculation

The requirements of Matriculation for Arts are set forth in detail in the Programme of Studies for Secondary Schools of the Department of Education. A summary appears on page 25. No applicant may be received as a regular student of the Junior Division in Arts and Science who carries any condition from Matriculation (the work of Grades IX, X and XI in the High Schools as prescribed for University entrance).

Undergraduate Course

A student who has fulfilled the requirements for Arts Matriculation may proceed to the General Bachelor of Arts degree by completing satisfactorily, subject to the rules and regulations set forth hereafter, forty units* of credit in the Junior Division in Arts and Science and thirty-two units of credit in the Senior General Division in Arts and Science. He may proceed to the Honors Bachelor of Arts degree by completing satisfactorily, subject to the rules and regulations set forth hereafter, forty units of credit in the Junior Division in Arts and Science and forty-eight units of credit in the Senior Honors Division in Arts. The work for the General degree is normally done in four annual sessions and that for the Honors degree in five, two being given to the Junior Division, and two or three, as the case may be, to the Senior Division.

Junior Division in Arts and Science

The work of the Junior Division in Arts and Science comprises the following courses from which work must be completed by the student proceeding to the Bachelor of Arts degree, representing, in the aggregate, forty units of credit. This work must be chosen subject to the restrictions set out below and the requirements with regard to prerequisite courses found at the opening of the respective departmental announcements. The Roman numeral after the name of a subject indicates the year of a student's course in which it is normally taken and the Arabic numeral in parentheses thereafter the value of the subject in units of credit towards a degree.

For convenience in administration, because the courses are almost invariably elected in year programs, they are set out on the year plan below. Credit, however, will be given and recorded for a student in any subject or group of subjects when the required standing therein has been obtained. Full standing of the Junior Division may not, of course, be claimed until all the requirements of the two years of the various groups hereunder have been fully met. A student may not, moreover, proceed to the Senior Division until at least thirty-six units of Junior Division credit have been obtained. See page 30.

^{*}A unit is a body of work to which is assigned for instructional purposes one hour of lecture or other class room exercise per week or one continuous laboratory period of two or three hours per week, throughout an entire session or the equivalent

First Year

(Normal program to consist of courses totalling twenty units1)

- Group A (four units)—English I (4).
- GROUP B (four units)—Mathematics I² (4).
- GROUP C (four units) French I (4) or German I (4) or Latin I (4) or Classical Greek II (4) or Hellenistic Greek II (4).
- GROUP D (eight units)—French I (4), if not elected in Group C; German I (4), if not elected in Group C; Latin I (4), if not elected in Group C; Classical Greek II (4), if not elected in Group C; Hellenistic Greek II (4), if not elected in Group C; History I (4); Chemistry I² (4) or Chemistry IA (4); Physics I² (4) or Physics IA (4); German IA (4); Classical Greek IA (4); Hellenistic Greek IA (4); Hebrew I (4); Icelandic I (4); Norse I (4); Music³ (4); Mathematics IA (2); Architectural Drawing I (2).

Second Year

(Normal program to consist of courses totalling twenty units1)

- GROUP A eight units—Two of the following—English II (4), French II (4), German IA (4) or German I (4) or German II (4), Latin II (4), Classical Greek IA (4) or Classical Greek II (4), Hellenistic Greek IA (4) or Hellenistic Greek II (4), Hebrew I (4) or Hebrew II (4), Icelandic II (4), Norse II (4).
- GROUP B (four units)—Economics II (2), History II (4), Ethics II (2) or Logic II (2), Mathematics IIA⁵ (2), Psychology II
- GROUP C (eight units)—Astronomy II (2); Botany II (2); Chemistry I (4) or Chemistry II (4), Geology II (2), Mathematics II (4), Mathematics IIA (2), Music³ (4), if not already elected in the First Year, Physics I (4) or Physics II (4), Psychology II⁵ (2), Zoology II (2) and courses not already elected from Cruze A and Pi already elected from Groups A and B'.

^{1.} A student who has not taken either Physics or Chemistry in his High School course for Matriculation must take four units of Science in his Junior Division.

^{2.} A student who has demonstrated a special aptitude for language study and who desires to take three foreign language courses in his First Year, may apply to the Arts and Science Studies Committee of the Senate for such rearrangement of his Junior Division programme as will secure release from the requirement of Mathematics I, or of a four-unit course or courses in Science, provided that (1) the three languages elected are from French, German, Latin, Greek (Classical or Hellenistic) and (2) that, of the three courses so chosen, at least two are from Group C. A student taking advantage of this provision may not elect four foreign languages.

^{3.} A student may not elect Music for credit in the Second Year who has done so in the First Year. The course so offered must involve the attainment of at least Grade VIII in Piano or Grade V in Violin or Grade III in Singing together with at least Grade V in Musical Theory in connection with the Music Syllabus of the University, or the equivalent.

^{4.} One of the two courses elected must be from French II, German II, Latin II.

If the student desires to enter the Faculty of Education after receiving the B.A. degree, English II should be elected here along with one of the three languages specified.

A student looking forward to the study of Theology may, if sponsored by his college, and subject to the approval of the Committee on Arts and Science Studies, elect Hellenistic Greek II in lieu of French II or German II or Latin II.

^{5.} A student electing Mathematics IIA in Group B must also elect Economics II.

^{6.} A student electing Psychology II in Group C must also elect either Zoology II or Astronomy II.

^{7.} For purposes of this choice, two-unit subjects if elected must be taken in pairs from Group B or from Group C before the transfer of subjects from other groups is made.

The program of work of each student must be approved by the Dean of the Faculty of Arts and Science or the Head of his College and the Committee on Arts and Science Studies of the Senate. The normal program for each session is work representing twenty units of credit.

The student should also bear in mind that he will not be accorded the units of credit towards a degree represented by any particular subject until all the requirements with respect to class work, laboratory work and examinations pertaining to that subject have been fully completed. He is referred to the regulations governing failures, supplemental examinations and Summer School work for information as to the way in which deficiencies can be removed.

The following considerations should be kept in view by students in considering their choices of subjects in the Junior Division:

- 1. Strict regard must be had for the prescription of prerequisites for the various subjects at the opening of the respective departmental announcements.
- 2. The Committee on Arts and Science Studies requires that, unless in exceptional cases, a subject be not elected in any year other than the one in which, according to its designation, it is "normally taken."
- 3. A departure from this rule is found in the practice of recognizing a student's right* in one year only of Senior Division to elect as *one* of his four subjects a four-unit subject of the Junior Division, provided of course that he secures the approval of the Committee on Arts and Science Studies.
- (4) (a) A student desiring to qualify for entrance upon the course for the degree in Civil Engineering or in Electrical Engineering, may if fully matriculated, do so upon completing twenty-two units in the Junior Division in Arts and Science upon the following course: English I, Mathematics I, Mathematics IA, Physics I or Physics IA, Chemistry I or Chemistry IA, and one of French I, German I, Latin I, Greek II. The language elected must have been taken for Matriculation.
- (b) A student desiring to qualify for entrance upon the course for the degree in Architecture may, if fully matriculated, do so upon completing twenty units in the Junior Division in Arts and Science upon the following course: English I, Mathematics I, Mathematics IA, Architectural Drawing I, Physics I or Physics IA, and French I.
- 5. A student desiring to qualify for entrance upon the course for the degree in Medicine may, if fully matriculated, satisfy the further academic requirements by completing forty units in the Junior Division in Arts and Science upon the following courses: English I, English II; Mathematics I; German IA, German IIA; Botany IIM; Chemistry I (if Chemistry has been taken at Matriculation) or Chemistry IA (if Chemistry has not been taken at Matriculation)

^{*}This privilege will be withdrawn at the opening of the session 1938-1939.

ulation), Chemistry IIM; Physics I (if Physics has been taken at Matriculation or Physics IA (if Physics has not been taken at Matriculation); Physics IIM; Zoology IIM.*†

- 6. The Advisory Board of the Department of Education has recently adopted a regulation providing for the admission to a Normal School for the course leading to the First Class Professional Teacher's Certificate, of a fully matriculated student of the University, who is able to present evidence of aggregate standing of 67% or higher on a course of 20 units credit value including English I, Mathematics I, either Physics I or Chemistry I, either French I or German I or Latin I or Classical Greek II, and another four-unit subject available for election by a student in the First Year of the Junior Division.
- 7. A student desiring to qualify for entrance upon the course for the degree in Law may, if fully matriculated (with a course involving Latin) do so upon completing forty units in the Junior Division, his course to include Latin I and to comply in all respects with the standard requirements for admission to the Senior Division of the curriculum leading to the B.A. or B.Sc degree.

Senior General Division in Arts and Science

A student may be admitted conditionally to the Senior General Division in Arts and Science who has completed at least thirty-six units of credit in the Junior Division upon an approved curriculum. In case he is permitted to enter without having completed in full the forty required units of the Junior Division this fact will be taken into account in approving his course for the first academic year of his work in the Senior Division.

The work of the Senior General Division in Arts and Science comprises the following courses from which work must be completed representing in the aggregate thirty-two units of credit. This work must be chosen subject to the restrictions set out below and the

[†]By arrangement with the University of Toronto the completion of this course may also be accepted for admission to the Second Year of its five-year course in Dentistry, leading to the degree of Doctor of Dental Surgery. For further details consult the announcement of the Faculty of Dentistry of the University of Toronto.

^{*}In general any standard course, beyond matriculation, given in a recognized University and accepted by it for two years' credit toward a B.A. or a B.Sc. degree is considered adequate for purposes of admission to the course in Medicine, provided the minimum requirements laid down above in Physics, Chemistry, Botany and Zoology are fully met. Students taking Grade XII with the study of Medicine in view, should elect the language, preferably a modern one, offered in their school.

Students undertaking to proceed to the degree of Bachelor of Arts or Bachelor of Science before entering upon the study of Medicine are advised to elect Chemistry II and Chemistry III, Botany II and Botany III, Zoology II and Zoology III and Physics II and Physics III in lieu of the more specialized pre-medical courses in these subjects.

It is to be understood that the University does not undertake to admit all students into the course in Medicine who have completed the courses necessary to fulfil academic entrance requirements. Applications for admission on the required form must be submitted by April 15th each year and selection by the Committee on Admissions will be based upon residence (preference being given to Manitoba students), scholastic attainments, and the probability of work of high quality in the Medical course. Admission to the first year in the medical course is tentative—final acceptance of students being dependent upon satisfactory work during the first term and the possession of such personal qualities as would point to the probability of success in the study and practice of Medicine.

If Latin has not been taken at Matriculation but the requirements for entrance upon the course for the B.A. or B.Sc. have been fully met by the election of another language or languages the student may proceed with pre-medical studies, but must supplement the Matriculation record by standing in Matriculation Latin before the academic requirements for entrance upon Medicine are fully met.

requirements with regard to prerequisite courses found at the opening of the respective departmental announcements. The Roman numeral after the name of a subject indicates the year of a student's course in which it is normally taken and the Arabic numeral in parentheses thereafter the value of the subject in units of credit towards a degree.

Third Year

(Normal program to consist of courses totalling sixteen units)

- Group A(twelve units)—English III (4), French III (4), German III (4), Classical Greek II (4) or Classical Greek III (4), Hellenistic Greek II (4) or Hellenistic Greek III (4), Greek Civilization (4) or Roman Civilization (4)*, Hebrew III (4), Latin III (4), Economics III (4), History III (4), Philosophy III (4) or Philosophy IV (4), Psychology III (4), Principles of Sociology (4) or Applied Sociology (4), Mathematics III (4), Applied Mathematics III (2) with Actuarial Science III (2) or one of them with either Psychology IIIA (2) or English IIIA (2).
- GROUP B (four units)—Botany III (4), Chemistry III (4), Geology III (4), Physics III (4), Zoology III (4), Biblical Literature A (4) or Biblical Literature B (4)†, Religious Education (Psychology and Methods) (4) or Religious Education (History and Principles) (4)†, a subject in Group A not already chosen.

Fourth Year

(Normal program to consist of courses totalling sixteen units)

- GROUP A (twelve units)—English IV (4), French IV (4), German IV (4), Classical Greek III (4) or Classical Greek IV (4), Hellenistic Greek III (4) or Hellenistic Greek IV (4), Greek Civilization (4) or Roman Civilization (4)*, Hebrew IV (4), Latin IV (4), Economics IV (4), History IV (4), Philosophy III (4) or Philosophy IV (4), Principles of Sociology (4) or Applied Sociology IV (4), Mathematics IV (4), Actuarial Science IV (4).
- GROUP B (four units)—Botany IV (4), Chemistry IV (4), Geology IV (4), Physics IV (4), Zoology IV (4), Biblical Literature A (4) or Biblical Literature B (4)†, Religious Education (Psychology and Methods (4) or Religious Education (History and Principles) (4)†, any subject in Group A not already chosen.

Students of the Senior General Division may also elect for credit (not exceeding four units) in Group B of the Third Year or Group B of the Fourth Year work from the following list of courses from the curriculum in Agriculture and Home Economics.

 $^{{}^*\}mathrm{Not}$ more than eight units may be taken in any year from the courses in Latin, Greek and Graeco-Roman Civilization.

[†]Not more than four units may be taken in any year from Biblical Literature and Religious Education.

- 1. Biochemistry, Courses eE, fF, Agriculture and Home Economics Calendar, lectures only, 2 units. (Prerequisite, Chemistry IIM or Chemistry III.)
- 2. General Bacteriology, Course c, Agriculture and Home Economics Calendar, 2 units.
- 3. Genetics and Eugenics, being Botany c and Zoology d, Agriculture and Home Economics Calendar, 4 units.
- 4. Systematic Entomology, being Course eE, Agriculture and Home Economics Calendar, 4 units.

The following considerations should be kept in view by students in considering their choice of subjects in the Senior General Division in Arts and Science:

- 1. Strict regard must be had for the prescription of prerequisites for the various subjects at the opening of the respective departmental announcements.
- 2. The Committee on Arts and Science Studies expects that in the main the subjects elected in the Third Year above will be carried forward in the Fourth Year. If a student does not, in his selection of courses in the Senior Division, wish to observe a sequence in at least three subjects, his reasons for asking for a departure from the principle of sequence should be formulated and presented to the Committee on Arts and Science Studies. Each case will be considered and dealt with on its own merits.
- 3. It is permissible, in connection with the work of one year of the Senior General Division to substitute, subject to the approval of the Committee on Arts and Science Studies, for four units of work there set down, four units from the Junior Division, such as, for example, the elementary work in a science or a language not already taken. Eight units of Junior Division work for Senior Division credit may be elected, four in each group, provided they represent two courses in sequence either in German or in Greek.*
- 4. For information as to possible alternative eight-unit courses in the second year of the Senior General Division, see under Senior Honors Division in Arts below.
- 5. A student who desires to qualify for the degree of Bachelor of Science in the General Course, must, at the end of the Senior Division, have completed Science courses of the weight of at least thirty-two units (of which at least twenty must be for courses normally taken in the Senior Division), with at least ten units in each of two Sciences. If he does not meet this requirement with respect to the Science content of his course, but has otherwise regularly completed the work of the Junior Division and the Senior General Division he will receive the degree of Bachelor of Arts in the General Course.
- 6. In the selection of students for admission to the First Year of the course in Education (on the completion of which an interim Collegiate certificate is granted by the Department of Education), preference will be given for the session 1937-1938 to students who, in

^{*}This privilege will be withdrawn at the opening of the session 1938-1939.

the Senior Division, have taken at least sixteen units of work in the following subjects which have application to the High School curriculum (eight units to be taken from each of two groups):

Group I—English, History, Economics.
Group II—Latin, Greek, French, German.

Group III—Mathematics.

Group IV—Physics, Chemistry, Botany, Zoology.

Beginning with the session 1938-1939, the above minimum program of subjects having application to the High School curriculum will be obligatory for all students.

Senior Honors Division in Arts

A student may be admitted to the Senior Honors Division in Arts who— $\,$

- 1. Has fully completed forty units of credit in the Junior Division upon an approved curriculum, and
- 2. Has been recommended by each of two Committees of Instruction on the basis of an adequate Junior Division record in the subject in question of say 60% to 67% as a minimum, and a demonstrated capacity for specialized work, for registration in the honors course offered by that department in the First Year of the Senior Honors Division.

Provision will also be made for registration in the First Year of the Senior Honors Division of students who have been recommended for admission to only one honors course on the basis of their Junior Division record and who desire to be given further opportunity to demonstrate their capacity for specialized study. Such students will register in the one honors course for which they have qualified and in ten additional units of work from the Third Year program of the Senior General Division in Arts, to be approved by the Committee on Arts and Science Studies.

The work of the Senior Honors Division in Arts comprises the following courses from which work must be completed representing in the aggregate forty-eight units of credit. This work must be chosen subject to the restrictions set out below and the requirements with regard to prerequisite courses found at the opening of the respective departmental announcements. The Roman numeral after the name of a subject indicates the year of a student's course in which it is normally taken and the Arabic numeral in parentheses thereafter the value of the subject in units of credit towards a degree.

Third Year

(Normal program to consist of courses totalling sixteen units)

- GROUP A (twelve units)—English III H (6); French III H (6); German III H (6); Classical Greek III H (6); History III H (6); Latin III H (6); Mathematics III H (6); Political Economy III H (6).
- GROUP B (four units to be chosen in a field not covered by the selection in Group A)—Any four-unit course from the Third Year program of the Senior General Division in Arts. See page 31.

A student may not continue in the Senior Honors Division who at the end of one annual session has not completed sixteen units of

work and who has not as well obtained at least 67% on each of the two subjects elected from Group A above, which subjects it is presumed he will elect in connection with his further work in the Senior Honors Division.

Applications will be entertained for registration in the Second Year of the Senior Honors Division in Arts from-

- Those who have completed two honors courses in the First Year with the required standing as above.
- Those who have completed one such course with the required standing and are recommended for registration in another subject by the Committee of Instruction therein on the basis of demonstrated capacity for specialized work as shown in connection with the ordinary Senior General Division course therein.

Fourth Year

(Normal program to consist of courses totalling sixteen units)

Two courses from the following for which the prerequisite standing has been obtained:

Actuarial Science and Economics IV H (8); English IV H (8); French IV H (8); German IV H (8); Classical Greek IV H (8); History IV H (8); Latin IV H (8); Mathematics IV H (8); Philosophy IV H (8); Physics IV H (8)*; Psychology IV H (8); Political Economy IV H (8).

A student who in the First Year of the Senior General Division records satisfactory achievement in a subject of his course and demonstrates capacity for further specialized work therein, may be recommended by the department of instruction and receive permission to undertake the eight-unit honors course in the subject in the succeeding year and this honors course will displace from his program two of the regular four-unit courses of the Second Year of the Senior General Division. Such a substitution may be made in respect of two subjects if the student's record warrants it. The course thus taken for credit towards a Bachelor of Arts degree in the General Course will bear the designation IV G.

At the close of the Second Year of the Senior Honors Division a student may be denied the right to go forward with the Honors work of the Third Year, where, in the opinion of both committees of examiners concerned with the rating of his work, his achievement does not warrant it, and the Senate may, on the joint recommendation of the two committees, admit him to the Bachelor of Arts degree in the General Course provided he has not fallen below 50% on any paper.

FIFTH YEAR

(Normal program to consist of courses totalling sixteen units)

Two courses; from the following for which the prerequisite standing has been obtained:

^{*}To be elected only in conjunction with Mathematics IV H.

[†]In special cases where the candidate for the B.A. Honors degree has already laid out his course for the M.A. degree and has selected the Department in which his major will be taken, he may, with the approval of his instructors, elect to take up to twelve units of work in the field of his prospective major subject and four units only in a secondary approved subject.

Actuarial Science and Economics V (8); English V (8); French V (8), German V (8); Classical Greek V (8); History V (8); Latin V (8); Mathematics V (8); Philosophy V (8); Physics V (8)*; Political Economy V (8); Psychology V (8).

On completion of the above course the student will receive the degree of Bachelor of Arts in the Honors Course.

II—MASTER OF ARTS

The following are the requirements for the degree of Master of Arts (M.A.):

- 1. To be accepted as a candidate for the degree of Master of Arts an applicant must hold the degree of Bachelor of Arts in the Honors Course of the University of Manitoba or possess such qualifications as the Committee on Post-Graduate Studies may deem to be the equivalent of this degree.
- 2. The candidate for the Master of Arts degree must, to earn the degree, complete at least one academic year of graduate work, where he devotes his whole time to study of the prescribed course. Where he does not devote his whole time to such study, the minimum period shall be two academic years, except in the case of students who attend a summer session in graduate work at some institution acceptable to the departments concerned, when the minimum time may be reduced to one year on recommendation of those departments. Students required to take two or more years for the degree must receive standing on at least one-third of their work before entering upon their final year.
- 3. Two subjects, not necessarily in different departments, shall be taken by every candidate for the M.A. degree. One of those shall be designated as the major subject and special attention shall be devoted to it. It shall be a subject in which the student has already completed the work of the undergraduate Senior Honors Division or in which, if he hold a General B.A. degree, he has already taken eight or twelve additional units of work necessary to round out the courses prescribed for the Honors degree. The minor subject shall be selected from a group related to the major subject. Not more than one-third of the student's time should be devoted to the minor subject. A total of 800 marks is assigned to the entire work for the M.A. degree, distributed as follows: 200 marks for the minor subject and 600 marks for the major subject and the thesis.
- 4. Every candidate for the Master of Arts degree must submit a thesis on some topic connected with his major subject that shall be judged satisfactory by the candidate's examining committee.
- 5. The student shall pursue his work under the direction of two or more instructors of whom at least one shall be a member of the University Faculty of Arts and Science. Recommendations with regard to Major and Minor courses and subject of thesis shall be drawn up by the departments immediately concerned after consultation with the candidate and such recommendations shall be submitted for final approval to the Committee on Post-Graduate Studies not later than December 1st in any year. In the meantime the student must register not later than October 9th at he office of the Registrar, indicating the full range of the work to be undertaken

^{*}To be elected only in conjunction with Mathematics V.

(which will later be outlined in more detail, if necessary), whether preliminary honors work or major or minor courses for the M.A. degree, and pay the required fees at the office of the Comptroller. Students who desire to undertake the work away from the University will not be permitted to register unless the library or other facilities to which they have access are satisfactory to the department or departments concerned.

- 6. The candidate for the Master of Arts degree shall pass such written examinations on the two subjects of his course at such times and under such conditions as the Committee on Post-Graduate Studies shall decide, and shall also undergo a final oral examination conducted by the examining committee. The committee which shall pass upon the merits of the thesis shall consist of the instructors under whose direction the candidate's work has been performed, and at least one other nominated by the Committee on Post-Graduate Studies. The pass mark at written examinations for the M.A. degree is 60%; the thesis, to be satisfactory, must receive a grade of at least 67%.
- 7. The thesis in its completed form shall be submitted not later than April 1st in any year to ensure the conferring of the degree at the Annual Convocation of that year. At least four printed or type-written copies are required, one of which shall be deposited in the Library. It is desirable that uniformity in style, format, etc., be observed and in reference to these matters the candidate should consult the Secretary of the Committee on Post-Graduate Studies.
- 8. For the present courses of study for the M.A. degree will in the main be outlined on request by the instructors in the departments concerned and adapted to suit the needs, capabilities and previous training of the applicants. A limited number of M.A. courses are prepared in advance, and these are listed along with the undergraduate courses of the same department elsewhere in this Calendar.
- 9. By special arrangement the course for the degree of Bachelor of Science in Agriculture, with specialization in Economics (the course involving the Agricultural Business option) is accepted as being equivalent, as a foundation for graduate study in Economics, to a General B.A. degree. The holder of the B.S.A. degree (Agricultural Business option) having taken a course in which there is a minimum of economic theory as such and a great deal of applied economics, is required, therefore, in his preliminary Honors work and his Master's work, to bring up his arrears in economic theory and to put himself in this respect on an equal footing with the student who has taken the Honors B.A. work. Such a student takes a Major in Economic Theory with a minor in either International Trade, Public Finance, Economic History, Political Science, or some other allied subject. His thesis is based upon investigational work in the field of Applied Economics, done under direction upon local materials. Approximately half of the course work is taken in regular classes (B.A. General and Honors) and the other half will be assigned reading. The total amount of the course work will be determined in part by the student's previous training and in part by the nature and scope of his special investigation. The minimum time in which the work can be carried out is two summers (given to investigation and reading) and one regular annual session (given

primarily to course work and lectures). For further details, consult the Calendar of the Faculty of Agriculture and Home Economics.

Since students are admitted to the course leading to the B.S.A. degree with any complete Grade XI standing (including that of the Entrance-to-Normal Course of the Manitoba Department of Education, which does not necessarily require knowledge of a foreign language), candidates for the M.A. degree, holding the Bachelor's degree in Agriculture, are required to establish a reading knowledge of either French or German before proceeding to their final examination.

MASTER OF ARTS IN EDUCATION

In view of the establishment of a separate Faculty of Education and the institution of the degrees in Education, Bachelor of Education and Master of Education, the Senate of the University has withdrawn the degree Master of Arts in Education formerly offered. For information as to courses in Education and the requirements for the above-mentioned degrees, consult the Calendar of the Faculty of Education.

CURRICULA IN SCIENCE

The University of Manitoba confers two degrees in Science, viz., Bachelor of Science (B.Sc.) and Master of Science (M.Sc.).

I—BACHELOR OF SCIENCE

Matriculation

The requirements for Matriculation for Science are set forth in detail in the Programme of Studies for Secondary Schools of the Department of Education. A summary appears on page 25. No applicant may be received as a regular student of the Junior Division in Arts and Science who carries any condition from Matriculation (the work of Grades IX, X and XI in the High Schools as prescribed for University entrance).

Undergraduate Course

A student who has fulfilled the requirements for Arts and Science Matriculation may proceed to the General Bachelor of Science degree by completing satisfactorily, subject to the rules and regulations set forth hereafter, forty units* of credit in the Junior Division in Arts and Science and thirty-two units of credit in the Senior Division in Arts and Science. He may proceed to the Honors Bachelor of Science degree by completing satisfactorily, subject to the rules and regulations set forth hereafter, forty-two units of credit in the Junior Division in Arts and Science and forty-eight units of credit in the Senior Honors Division of Arts and Science. The work for the General degree is normally done in four annual sessions and that for the Honors degree in five, two being given to the Junior Division and two or three, as the case may be, to the Senior Division.

Junior Division in Arts and Science

The work of the Junior Division in Arts and Science comprises the following courses from which work must be completed by the student proceeding to the Bachelor of Science degree, representing, in the aggregate, forty units of credit for the General degree, and forty-two units for the Honors degree. This work must be chosen subject to the restrictions set out below and the requirements with regard to prerequisite courses found at the opening of the respective departmental announcements. The Roman numeral after the name of a subject indicates the year of a student's course in which it is normally taken and the Arabic numeral in parentheses thereafter, the value of the subject in units of credit towards a degree.

For convenience in administration, because the courses are almost invariably elected in year programs, they are set out on the year plan below. Credit, however, will be given and recorded for a student in any subject or group of subjects when the required standing therein has been obtained. Full standing of the Junior Division may of course not be claimed until all the requirements of

^{*}A unit is a body of work to which is assigned for instructional purposes one hour of lecture or other class room exercise per week or one continuous laboratory period of two or three hours per week, throughout an entire session, or the equivalent.

the two years in the various groups hereunder have been fully met. A student may not moreover proceed to the Senior Division until at least thirty-six units of Junior Division credit have been obtained. See page ??

First Year

(Normal program to consist of courses totalling twenty units)

GROUP A (four units)—English I (4).

GROUP B (four units) - Mathematics I (4).

GROUP C (four units)—French I (4) or German I (4) or German IA (4) or Latin I (4) or Greek II (4).

GROUP D (eight units)—Chemistry I (4) or Chemistry IA (4); Physics I (4) or Physics IA (4).

Second Year

(Normal program to consist of courses totalling twenty units)

GROUP A (eight units)—English II (4); History II (4); French II (4); German II (4); German IIA (4); Latin II (4); Greek III (4); Mathematics II (4).

GROUP B (twelve units)—Astronomy II (2); Botany II (2); Chemistry II (4); Geology II (2); Mathematics IIA (2); Physics II (4); Zoology II (2); Economics II (2); Psychology II (2), to be elected only with Zoology II.

The program of work of each student must be approved by the Dean of the Faculty of Arts and Science or the Head of his College and the Committee on Arts and Science Studies of the Senate. The normal program for each session is work representing twenty units of credit.

The student should also bear in mind that he will not be accorded the units of credit towards a degree represented by any particular subject until all the requirements with respect to class work, laboratory work and examinations pertaining to that subject have been fully completed. He is referred to the regulations governing failures, supplemental examinations and Summer School work for information as to the way in which deficiencies can be removed.

The following considerations should be kept in view by students in considering their choices of subjects in the Junior Division:

- 1. Strict regard must be had for the prescription of prerequisites for the various subjects at the opening of the respective departmental announcements.
- 2. The Committee on Arts and Science Studies will require that, unless in exceptional cases, a subject be not elected in any year other than the one in which, according to its designation, it is "normally taken."
- 3. A departure from this rule is found in the practice of recognizing a student's right in one year only of the Senior General Division or in the first year* of the Senior Honors Division to elect as one of his four subjects a four-unit subject of the Junior Division, provided of course that he secures the approval of the Committee on Arts and Science Studies.

^{*}This privilege will be withdrawn at opening of the session 1938-1939.

- 4. (a) A student desiring to qualify for entrance upon the course for the degree in Civil Engineering or in Electrical Engineering, may, if fully matriculated, do so, upon completing twenty-two units in the Junior Division in Arts and Science upon the following course: English I, Mathematics I, Mathematics IA, Physics I or Physics IA, Chemistry I or Chemistry IA, and one of French I, German I, Latin I, Greek II. The language elected must have been taken for Matriculation.
- (b) A student desiring to qualify for entrance upon the course for the degree in Architecture, may, if fully matriculated, do so upon completing twenty units in the Junior Division in Arts and Science upon the following course: English I, Mathematics I, Mathematics IA, Architectural Drawing I, Physics I or Physics IA, and French I.
- 5. A student desiring to qualify for entrance upon the course for the degree in Medicine may, if fully matriculated, satisfy the further academic requirements by completing forty units in the Junior Division in Arts and Science upon the following course*: English I, English II; Mathematics I; German IIA, German IIA; Botany IIM; Chemistry I (if Chemistry has been taken at Matriculation) or Chemistry IA (if Chemistry has not been taken at Matriculation), Chemistry IIM; Physics I (if Physics has been taken at Matriculation) or Physics IA (if Physics has not been taken at Matriculation); Physics IIM; Zoology IIM.
- 6. The Advisory Board of the Department of Education has recently adopted a regulation providing for the admission to a Normal School for the course leading to the First Class Professional Teacher's Certificate, of a fully matriculated student of the University who is able to present evidence of aggregate standing of 67% or higher on a course of 20 units credit value including English I, Mathematics I, either Physics or Chemistry I, either French I or German I or Latin I or Classical Greek II, and another four-unit subject available for election by a student in the First Year of the Junior Division.

^{*}In general any standard course, beyond matriculation, given in a recognized University and accepted by it for two years' credit toward a B.A. or a B.Sc. degree, is considered adequate for purposes of admission to the course in Medicine, provided the minimum requirements laid down above in Physics, Chemistry, Botany and Zoology are fully met. (Students taking Grade XII with the study of Medicine in view, should elect the language, preferably a modern one, offered in their school.)

Students undertaking to proceed to the degree of Bachelor of Arts or Bachelor of Science before entering upon the study of Medicine are advised to elect Chemistry II and Chemistry III, Botany III and Botany III, Zoology II and Zoology III, and Physics III and Physics III in lieu of the more specialized pre-medical courses in these subjects.

It is to be understood that the University does not undertake to accept all students into the course in Medicine who have completed the courses necessary to fulfil academic entrance requirements. Applications for admission on the required form must be submitted by March 15th each year and selection by the Committee on Admissions will be based upon residence, preference being given to Manitoba students), scholastic attainments, and the probability of work of high quality in the Medical course. Admission to the first year in the medical course is tentative—final acceptance of students being dependent upon satisfactory work during the first term and the possession of such personal qualities as would point to the probability of success in the study and practice of Medicine.

If Latin has not been taken at Matriculation but the requirements for entrance upon the course of the B.A. or B.Sc. have been fully met by the election of another language or languages the student may proceed with pre-medical studies, but must supplement the Matriculation record by standing in Matriculation Latin before the academic requirements for entrance upon Medicine are fully met.

- 7. A student who desires to qualify for the degree of B.Sc. in the General Course must, at the end of the Senior Division, have completed Science courses of the weight of at least thirty-two units (of which at least twenty must be for courses normally taken in the Senior Division) and at least two Science subjects must be continued to the end of the Senior Division. It is required that he elect either Physics I or Chemistry I in the Junior Division and should make additional Science elections in view of the requirements above.
- 8. In order that students intending to enter the Senior Honors Division in Science may be informed of the more usual and desirable combinations of subjects for their work of the Second and Third Years of the Senior Division, and further, in order that such students may have some guidance in the selection of their subjects in the Junior Division and the First Year of the Senior Honors Division, so that they may acquire adequate preliminary training for the more specialized work of the last two years, the following suggestions are made:

It is recommended that one of the following combinations be selected in the Second and Third Years of the Senior Honors Division, viz.: Botany and Zoology; Chemistry and Physics; Chemistry and Botany; Chemistry and Zoology; Chemistry and Geology; Mathematics and Physics; Geology and Zoology, Geology and Botany. Any student who for special reasons desires to prepare himself for the election of any combination of subjects not listed here should consult the Departments concerned at the earliest opportunity.

First Year, Junior Division

Students intending to proceed to the Senior Honors Division in Science should elect the following subjects: English I (4); Mathematics I (4); Physics I (4) or Physics IA (4); Chemistry I (4) or Chemistry IA (4); French I (4) or German I (4) or German IA (4).

Second Year, Junior Division

Students intending to proceed to the Senior Honors Division in Science should follow the program as laid down for the Second Year of the Junior Division in Science on page 39 and should make the following selections for the various Science combinations of the Second and Third Years of the Senior Honors Division:

BOTANY AND ZOOLOGY BOTANY AND CHEMISTRY CHEMISTRY AND ZOOLOGY Physics II (4); Chemistry II (4); Botany II (2); Zoology II (2); Mathematics II (4).

CHEMISTRY AND PHYSICS
MATHEMATICS AND PHYSIC

Mathematics II (4); Chemistry II (4); Physics II (4).

MATHEMATICS AND PHYSICS | Physics II (4).
CHEMISTRY AND GEOLOGY — Chemistry II (

—Chemistry II (4); Geology II (2); Physics II (4); Zoology II (2), or Botany II (2); Mathematics II (4).

GEOLOGY AND ZOOLOGY GEOLOGY AND BOTANY Geology II (2); Botany II (2); Zoology II (2); Astronomy II (2); Chemistry II (4).

First Year, Senior Division

The following selections of subjects for the various Science combinations of the Second and Third Years of the Senior Honors Division should be made:

BOTANY AND ZOOLOGY

-Botany III (4); Zoology III (4); 8 units from Chemistry III (4); Physics III (4); Geology II (2); an Arts subject (2).

CHEMISTRY AND PHYSICS

-Chemistry III (4) Physics III (4); Applied Mathematics III (4) or Mathematics III (4); 4 additional units to be selected.

CHEMISTRY AND ZOOLOGY CHEMISTRY AND BOTANY

Chemistry III (4); Botany III (4); Zoology III (4); 4 additional units to be selected.

CHEMISTRY AND GEOLOGY

—Chemistry III (4); Geology III (4); Physics III (4); Botany III (4) or Zoology III (4) or Mathematics III

MATHEMATICS AND PHYSICS—Mathematics III (4); Physics III (4); and 8 additional units to be selected.

GEOLOGY AND ZOOLOGY GEOLOGY AND BOTANY

Geology III (4); Botany III 4); Zoology III (4); Chemistry III (4).

Senior General Division in Arts and Science

A student may be admitted conditionally to the Senior General Division in Arts and Science who has completed at least thirty-six units of credit in the Junior Division upon an approved curriculum. In case he is permitted to enter without having completed in full the forty required units of the Junior Division this fact will be taken into account in approving his course for the first academic year of his work in the Senior Division.

The work of the Senior General Division in Arts and Science comprises the following courses from which work must be completed representing in the aggregate thirty-two units of credit. This work must be chosen subject to the restrictions set out below and the requirements with regard to prerequisite courses found at the openings of the respective departmental announcements. The Roman numeral after the name of a subject indicates the year of a student's course in which it is normally taken and the Arabic numeral in parentheses thereafter the value of the subject in units of credit towards a degree.

Third Year

(Normal program to consist of courses totalling sixteen units)

- GROUP A (twelve units)—Botany III (4); Chemistry III (4); Geology III (4); Mathematics III (4); Physics III (4); Zoology III (4).
- GROUP B (four units)—Astronomy III (4); Applied Mathematics III (4); Actuarial Science III (2); Bacteriology (2); Biochemistry (2); General Science Mathematics (2)²; English III (4); French III (4); German III (4); Economics III (4); Philosophy III (4); Psychology III (4); a subject in Group A not already chosen ject in Group A not already chosen.

^{1.} To be taken only by students who elect also Mathematics III and Physics III.

^{2.} To be taken only by those who have not taken Mathematics II.

Fourth Year

(Normal program to consist of courses totalling sixteen units)

- GROUP A (twelve units)—Botany IV (4); Chemistry IV (4); Geology IV (4); Mathematics IV (4); Physics IV (4); Zoology IV (4).
- GROUP B (four units)—Applied Mathematics IV (4); Bacteriology (2); Biochemistry (2); English IV (4); Economics IV (4); Philosophy IV (4); Psychology IV (4); French IV (4); German IV (4); a subject in Group A not already chosen.

Students of the Senior General Division may also elect for credit (not exceeding four units) in Group B of the Third Year or Group B of the Fourth Year work from the following list of courses from the curriculum in Agriculture and Home Economics:

- 1. Genetics and Eugenics, being Botany c and Zoology d, Agriculture and Home Economics Calendar, 4 units.
- 2. Systematic Entomology, being Course eE, Agriculture and Home Economics Calendar, 4 units.

The following considerations should be kept in view by students in considering their choices of subjects in the Senior General Division in Arts and Science:

- 1. Strict regard must be had for the prescription of prerequisites for the various subjects at the opening of the respective departmental announcements.
- 2. The Committee on Arts and Science Studies will expect that in the main the subjects elected in the Third Year above will be carried forward in the Fourth Year. If a student does not, in his election of courses in the Senior Division, wish to observe a sequence in at least three subjects, his reasons for asking for a departure from the principle of sequence should be formulated and presented to the Committee on Arts and Science Studies. Each case will be considered and dealt with on its own merits.
- 3. It is permissible,* in connection with one or other of Groups I and II, to substitute, subject to the approval of the Committee on Arts and Science Studies, for four units of work there set down, four units from the Junior Division, such as, for example, the elementary work in a Science or a Language not already taken. Eight units of Junior Division work for Senior Division credit may be elected, four in each group, provided they represent two courses in sequence, either in German or in Greek.
- 4. A student who desires to qualify for the degree of Bachelor of Science in the General Course must, at the end of the Senior Division, have completed Science courses of the weight of at least thirty-two units, (of which at least twenty must be for courses normally taken in the Senior Division), and at least two Science subjects must be continued to the conclusion of the Second Year of the Senior Division. If he does not meet this requirement with respect to the Science content of his course, but has otherwise regularly completed the work of the Junior Division and the Senior General Division, he will receive the degree of Bachelor of Arts in the General Course.

^{*}This privilege will be withdrawn at opening of the session 1938-1939.

5. In the selection of students for admission to the First Year of the course in Education (on the completion of which an interim Collegiate certificate is granted by the Department of Education), preference will be given, for the session 1937-1938, to students who, in the Senior Division, have taken at least sixteen units of work in the following subjects which have application to the High School curriculum (eight units to be taken from each of two groups):

Group I—English, History, Economics, Group II—Latin, Greek, French, German.

Group III-Mathematics.

Group IV—Physics, Chemistry, Botany, Zoology.

Beginning with the session 1938-1939, the above minimum program of subjects, having application to the High School curriculum, will be obligatory for all students.

Senior Honors Division in Science

A student may be admitted to the Senior Honors Division in Science who has fully completed the forty required units of credit in the Junior Division in Arts and Science upon a curriculum approved for the purpose.

A student who, at the close of two years in the Junior Division, has not qualified to enter the Senior Honors Division, may, after one year's work in the Senior General Division, transfer to the Senior Honors Division, provided he has by that time—

- (1) Completed forty units of credit in the Junior Division upon an approved curriculum and sixteen units of credit in the Senior General Division.
- (2) Obtained at least 67% in each of two subjects (representing eight units of credit) of the Third Year of the Senior General Division, which subjects he will be permitted to elect in connection with further work in the Senior Honors Division.

The work of the Senior Honors Division in Science comprises the following courses from which work must be completed, representing in the aggregate forty-eight units of credit. This work must be chosen subject to the restrictions set out below and the requirements with regard to prerequisite courses found at the opening of the respective departmental announcements. The Roman numeral after the name of a subject indicates the year of a student's course in which it is normally taken, and the Arabic numeral in parentheses thereafter the value of the subjects in units of credit towards a degree.

Third Year

(Normal program to consist of courses totalling sixteen units) *

- GROUP A (twelve units)—Botany III (3); Chemistry III (4); Geology III (4); Mathematics III (4); Physics III (4); Zoology III (4).
- GROUP B (four units)—Astronomy III (4); Applied Mathematics III (4); Actuarial Science III (2); Bacteriology (2); Bio-

^{*}For guidance in the choice of courses the student is referred to Pages 41-42.

1. To be taken only by students who elect also Mathematics III and Physics III.

chemistry (2); General Science; Mathematics (2); English III (4); French III (4); German III (4); Political Economy III (4); Philosophy III (4); Psychology III (4); a subject in Group A not already chosen.

A student may not continue in the Senior Honors Division in Science who at the end of one annual session therein has not completed in full the work of the Third Year totalling sixteen units and who has not as well obtained at least 67% in each of two subjects representing eight units of credit, which subjects he proposes to elect in connection with his further work in the Senior Honors Division.

Fourth Year

(Normal program to consist of courses totalling sixteen units)

Two courses from the following for which the prerequisite standing has been obtained:

Botany IV H (8); Chemistry IV H (8); Geology IV H (8); Mathematics IV H (8); Physics IV H (8); Zoology IV H (8).

At the close of the Fourth Year in the Senior Honors Division a student may be denied the right to go forward with the Honors work of the Fifth Year, where, in the opinion of both committees of examiners concerned with the rating of his work, his achievement does not warrant it, and the University Council may, on the joint recommendation of the two committees, admit him to the Bachelor of Science degree in the General Course provided he has not fallen below 50 per cent. on any paper.

Fifth Year

(Normal program to consist of courses totalling sixteen units)

Two courses* from the following for which the prerequisite standing has been obtained:

Botany V (8); Chemistry V (8); Geology V (8); Mathematics V (8); Physics V (8); Zoology V (8).

On completion of the above work the student will receive the degree of Bachelor of Science in the Honors Course.

II—MASTER OF SCIENCE

The following are the requirements for the degree of Master of Science (M.Sc.):

- 1. To be accepted as a candidate for the degree of Master of Science an applicant must hold the degree of Bachelor of Science in the Honors Course of the University of Manitoba or possess such qualifications as the Committee on Post-Graduate Studies may deem to be the equivalent of this degree.
- 2. (a) The candidate for the Master of Science degree must, to earn the degree, complete at least one year of graduate work in

^{1.} To be taken only by students who have not taken Mathematics II.

*In special cases where the candidate for the B.Sc. Honors degree has already laid out his course for the M.Sc. degree and has selected the Department in which his major will be taken, he may, with the approval of his instructors, elect to take up to twelve units of work in the field of his prospective major subject and four units only in a secondary approved subject.

one or more of the following departments of the University of Manitoba: Mathematics, Physics, Chemistry, Geology, Botany, Zoology, Physiology, Biochemistry. He shall complete and pass an examination on two courses of study, one closely related to the subject of his thesis and the other on an allied subject. His work shall be done under the direction of at least two members of the University Faculty of Arts and Science. The thesis and main course of study shall be taken in a department in which the student has completed the work of the Senior Honors Division in his undergraduate course; the other may be taken in the same or an allied department.

- (b) A total of 800 marks is assigned to the entire work for the M.Sc. degree, distributed as follows: 200 marks for the minor subject and 600 marks for the major subject and the thesis.
- 3. Every candidate for the Master of Science degree shall submit a thesis based on original work done under the direction of the department in which he has elected to do his research and this thesis must be found satisfactory by the candidate's examining committee.
- 4. A Bachelor of Science of the University of Manitoba may be permitted to meet the requirements for the Master of Science degree by courses of study taken in another University if such work be approved by the Committee on Post-Graduate Studies after reference to the Science Committee of the University Faculty of Arts and Science.
- 5. (a) Every applicant for admission as a candidate for the Master of Science degree should first consult with the heads of the departments of instruction in which he proposes to work and should arrange to submit, through them, to the Committee on Post-Graduate Science, for final approval, not later than December 1st in any academic year, an outline of the courses he plans to undertake during that year. In the meantime the student must register not later than October 9th at the office of the Registrar, indicating the full range of the work to be undertaken (which may be later outlined in more detail, if necessary), whether preliminary honors work or major or minor courses for the M.Sc. degree, and pay the required fees at the office of the Comptroller.
- (b) The nature of the thesis shall also by December 1st receive the approval of the Committee on Post-Graduate Studies after reference to the Science Committee of the University Faculty of Arts and Science.
- 6. For the examination of the thesis of each candidate the examining committee shall consist of the instructors under whose direction the work has been performed and one other nominated by the Committee on Post-Graduate Studies. The pass-mark at written examinations for the M.Sc. degree is 60%; the thesis, to be satisfactory, must receive a grade of at least 67%.
- 7. The thesis in its completed form shall be submitted not later than the 1st of April in any year to ensure the conferring of the degree at the Annual Convocation of that year. At least four printed or typewritten copies of the thesis shall be submitted by the candidate. One of these will subsequently be deposited in the University Library. It is desirable that uniformity in style, format, etc., be

observed, and in reference to these matters the candidate should consult the Secretary of the Committee on Post-Graduate Studies.

8. By special arrangement, the course for the degree of Bachelor of Science in Agriculture is accepted as being equivalent, as a foundation for graduate study in Science, to a General B.Sc. degree. The holder of the B.S.A. degree, having taken a course, in which of necessity, the technical applications of the various Sciences have been emphasized and a minimum of time spent on pure Science, should, in his first year of additional study, in which he raises his standing to one that is equivalent to that of the Honors B.Sc., take most of his work in the field of pure Science. He is required, therefore, to take sixteen units of work in Senior Division courses General or Honors (not less than eight and not more than twelve in the field in which his major subject will fall and four at least in some other department). His course work would in the main be taken under the Faculty of Arts and Science and his investigational work under the Faculty of Agriculture and Home Economics. The following Science Departments of that Faculty are now prepared to undertake graduate work: Agronomy; Chemistry; Plant Pathology (with the co-operation of the Dominion Rust Laboratory); Bacteriology and Animal Pathology. For further details consult the Calendar of the Faculty of Agriculture and Home Economics.

Since students are admitted to the course leading to the B.S.A. degree with any complete Grade XI standing (including that of the Entrance to Normal Course of the Manitoba Department of Education, which does not necessarily require knowledge of a foreign language), candidates for the M.Sc. degree holding the Bachelor's degree in Agriculture, are required to establish a reading knowledge of either French or German before proceeding to their final examination.

TENTATIVE TIME TABLE, 1937-1938

JUNIOR DIVISION IN ARTS AND SCIENCE

FIRST YEAR

BROADWAY SITE

| 48 | | | | | |
|--|---|---|---|---|---|
| FRIDAY English I, Sec. 2. Mathematics I, Sec. 1. | French I, Practice German IA, Sec. 4. German I | German IA, Sec. 2. Greek I, History I, Sec. 1. Physics I and I A | Chemistry I and I A French I, Authors Sec. 4. | Chemistry I and I A Sec. C (2-5 p.m.) History I, Secs. 1 and 2. Physics I and I A. Sec. C (2-5 p.m. | |
| THURSDAY English I, Sec. 3. Mathematics I, Sec. 1. | French I, Authors French I, Practice Sec. 2. German IA, Sec. 1. Latin I, Sec. 1. Sec. 2. | French I, Authors Sec. 1. German I Mathematics IA | Chemistry I and IA German IA, Sec. 2. | French I, Practice Sec. 3. Greek I History I, Sec. 2. | English I, Sec. 1. Mathematics I, Sec. 2. Sec. 3. |
| WEDNESDAY English I. Sec. 1. Mathematics I, Sec. 2. | French I, Authors Sec. 2. Latin I, Sec. 1. Fr Sec. 2. Ge | German IA, Sec. 2. History I, Sec. 1. Physics I and I A | English I, Sec. 2. Mathematics I, Sec. 3. | Chemistry I and I A Sec. B. (2-5 p.m.) French I, Practice Sec. I. History I, Sec. 2. | French I, Practice Sec. 4. |
| TUESDAY English I, Sec. 3. Mathematics I, | French I, Authors French I, Practice Sec. 3. German IA, Sec. 1. Latin I, Sec. 1. | English I, Sec. 1. Mathematics I, Sec. 2. Sec. 2. | Chemistry I and IA German IA, Sec. 2. | French I. Practice Sec. 3. German I and I.A. Physics I and I.A., Prect. Sec. B. (2-5 p.m.) | French I, Authors Greek I Sec. 4. |
| MONDAY English I. Sec. 1. Mathematics I. Sec. 2. | French I, Authors German IA, Sec. I. German I Mathematics IA | Greek I History I, Sec. 1. Physics I and IA | French I, Authors Sec. 2. Latin I, Sec. 1. Sec. 2. | Chemistry I and I A Sec. A. (2-5 p.m.) French I, Practice Sec. I. History I, Sec. 2. Physics I and I A, Pract. Sec. A. (2-5 p.m.) | |
| 11ME 9 to 9.50 | 10.10 to 111 | 11.10 to 12 | 12.10 to 1 | 2.10 to 3 | 3.10 to 4 |

N.B.—Architectural Drawing is given in the Architecture class rooms, fourth floor, Arts Building, Fort Garry site, on Wednesdays and Fridays from 2-5 p.m., and on Saturday mornings from 9-11 o'clock.
Chemistry I A. Saturday from 9-12 a.m.
Physics I A. Lecture, Thursday, 4-5 p.m.

TENTATIVE TIME TABLE, 1937-1938 JUNIOR DIVISION IN ARTS AND SCIENCE

| SECOND YEAR | | JUNIOR DIVISION | JUNIOR DIVISION IN ARTS AND SCIENCE | ENCE | BROADWAY SITE |
|--|----------------|--|--|--|--|
| MONDAY | | TUESDAY | WEDNESDAY | THURSDAY | FRIDAY |
| Chemistry IIM German II History II Physics II | | Botany II and IIM Mathematics II | German IA, Sec. 3. French II, Practice Sec. 4. German IIA History II | Chemistry IIM German II Latin II Physics II | German IA, Sec. 3. French II, Pract. Sec. 4. German IIA History II |
| Chemistry IIM, Pract. (10 a.m. to 1 p.m.) French II, Authors Latin II | n. rs 1. | English II, Verse Sec. 1. Sec. 2. Sec. 3. | English II, Prose Sec. 1. Sec. 2. Sec. 3. Mathematics IIA | Astronomy II. Chemistry IIM, Pract. (10 a.m. to 1 p.m.) | English II, Verse Sec. 1. Sec. 2. Sec. 3. |
| French II, Practice Sec. 1. Mathematics II Zoology II | 1. | Botany IIM, Pract. (11 a.m. to 1 p.m.) French II, Authors Sec. 2. German II | German IA, Sec. 2. French II, Authors Sec. 1. Zoology IIM | French II, Practice Sec. 1. Mathematics II Zoology II | German IA, Sec. 2. Latin II Zoology IIM |
| English II, Prose Sec. 4. Sec. 5. French II, Practice Sec. 2. Psychology II | 2.5°5.5.4 | German I A, Sec. 2. Astronomy II Economics II French II, Practice Sec. 3. | Chemistry IIM Geology II German II | German IA, Sec. 2. Chemistry II Economics II French II, Practice Sec. 3. | English II, Prose Sec. 4. Sec. 5. Sec. 5. French II, Practice Sec. 2. |
| English II, Prose Secs. 1, 2, Greek II Mathematics IIA | ri ri | Chemistry II Physics IIM, Sec. 1. (2-5 p.m.) | Logic II Physics II, Pract. (2-5 p.m.) Zoology IIM, Pract. (2-5 p.m.) | Botany II & IIM Mathematics II | French II, Authors Sec. 2. Geology II Sec. 2. (2-5 p.m.) Zoology IIM, Pract. (2-5 p.m.) Sec. 2. (2-5 p.m.) |
| Botany II, Pract. & Zoology, III, Pract. 3-5 p.m.) on alternate weeks Physics II, Practical Physics II, Practical (3-6 p.m.) Zoology IIM | sks all 1. | Chemistry II, Pract. (3-6 p.m.) Greek II | Geology II, Pract. (3-5 p.m.) Psychology II | German IA, Sec. 3. Chemistry II, Fract. German IIA | Geology II, Pract. Sec. 2. Greek II Logic II |
| German 1A Sec. 3. | · · | MANUAL PROPERTY OF THE PARTY OF | Charles of the Control of the Contro | | |

TENTATIVE TIME TABLE, 1937-1938

FORT GARRY SITE SENIOR GENERAL DIVISION IN ARTS AND SCIENCE

| | | | | 50 |) | | | |
|---|-----------|---|--|---|---|--|---|-----------------------------|
| TOTAL CURING TAIL | FRIDAY | Botany III Greek III & IV History III Chemistry IV Latin IV Mathematics IV A (Probability) | Latin III Physics III Geology IV Psychology IV Sociology IV | Chemistry III Psychology III Sociology III French IV Mathematics IV A Physics IV | French III History IV | Chemistry III, Pract. (2-5 p.m.) English III Botany IV Economics IV | Economics III English IV | |
| | THURSDAY | Physics III Psychology III Sociology III Latin IV ZoologyIV | Latin III Zoology IIV Psychology IV Sociology IV, Pract. (10 a.m1 p.m.) | Botany III, Pract. (11 a.m1 p.m.) Greek III and IV Mathematics III Philosophy III English IV | English III Mathematics IV Philosophy IV | Economics III Greek Civilization III & IV Zoology III, Pract. (2-5 p.m.) French IV Fhysics IV, Pract. (2-5 p.m.) | French III Economics IV | |
| ISLOID IN THE STATE OF | WEDNESDAY | Biochemistry History III Zoology III Botany IV English IV Mathematics IV A (Probability) | English III Geology III Mathematics IIIA Botany IV, Pract. (I0 a.m1 p.m.) Mathematics IV Philosophy IV | Geology III, Pract. (11 a.m1 p.m.) Mathematics III Philosophy III French IV Mathematics IV A | French III Greek III & IV History IV | German III Latin III Physics III, Pract. (2-5 p.m.) Geology IV German IV | German III Greek Civilization III & IV Geology IV, Pract. (3-6 p.m.) German IV | |
| SENIOR GENERAL DIVISION IN MAIS AND SOLEMOE | TUESDAY | Bacteriology Mathematics III Philosophy III Economics IV | Economics III Greek Civilization III & IV Zoology III Mathematics IV Philosophy IV | Physics III Psychology III Sociology III Latin IV Physics IV | Chemistry III Latin III Psychology IV Sociology IV Zoology IV | Chemistry III, Pract. (2-5 p.m.) French III English IV Zoology IV, Pract. (2-5 p.m.) | English III French IV | History III History IV |
| NAC. | MONDAY | Biochemistry Geology III History III Mathematics IIIA Physics IV Psychology IV Sociology IV | Geology III, Pract. (10 a.m1 p.m.) Psychology III Sociology III Chemistry IV Economics IV | Bacteriology, Pract. (11 a.m1 p.m.) Economics III Botany IV Mathematics IV Philosophy IV | Greek III & IV Mathematics III Philosophy III Geology IV History IV | Botany III German III Greek Civilization III & IV Chemistry IV, Fract. (2-5 p.m.)* | Botany III, Pract. (3-5 p.m.) German III German IV | 1.10 History III History IV |
| | HOUR | 9.10 to 10 | 10.10 to 11 | 11.10 to 12 | 12.10 to 1 | 2.10 to 3 | 3.10 to 4 | 4.10 to 5 |

A time table for Honors Courses (including III H Courses) will be arranged at the opening of the session 1937-38. *An additional period in Chemistry IV, Pract., will be allotted at the opening of the session.

COURSES IN ARTS AND SCIENCE IN DETAIL

DEPARTMENT OF BOTANY

William Leach, M.Sc., Ph.D., D.Sc.

C. W. Lowe, M.Sc., F.A.A.S.

Assistant Professor
Harold J. Brodie, M.Sc., Ph.D.

Assistant Professor

BOTANY II M—Courses 1, 2; 3, 4.

BOTANY II—Courses 1, 2; 3a, 4a.

BOTANY III—Courses 5, 6; 7, 8. (Prerequisite, Botany II or equivalent.)

BOTANY IV—Courses 9, 10; 11, 12. (Prerequisite, Botany III or equivalent.)

BOTANY IV H—Courses 9, 10; 11, 12; and 13, 14; 15, 16. (Prerequisite, Botany III or equivalent.)

BOTANY V—Courses 17, 18; 19, 20; and 21, 22; 23, 24. (Prerequisite, Botany IV H or equivalent.)

First Year Pharmacy (Diploma Course) -Courses 1, 2; 3, 4.

Second Year Pharmacy (Degree Course) — Courses 1, 2; 3, 4.

Third Year Pharmacy (Degree Course) — Courses 9, 10; 11, 12.

Courses 25, 26; 27, 28 are designed for students in the Senior Honors Division who are also taking Geology. (Prerequisite, Botany IV or IV H.)

Students intending to enter courses in Botany in the Senior Honors Division in Science are advised to consult pages 40-41 for guidance as to choice of subjects in the Junior Division and in the First Year of the Senior Division.

N.B.—For key to system of numbering courses, see page 5.

1, 2, General Botany. An introductory lecture course covering among other topics, the following: Classification of objects; comparison of living and non-living matter; the difference betweer animals and plants. The structure of the seed and content of its cells; the seeds of the pea, bean, castor oil plant, and date palm; the grains of wheat and corn; the conditions for germination, and the phenomena accompanying it; the exhaustion of the reserve foodstuffs. The seedling: its structure, mode of development and relations with external conditions; the theory of irritability; geotropism, heliotropism and hydrotropism; the further development of shoot and root. The general morphology of the plant body, and the principal modifications of the stem, leaf and root; buds, grasshaulms, stolons, runners rhizomes, corms, tubers, bulbs, spines and thorns, tendrils, cladodes phyllodes, compound leaves, etc.; the growing point of stems; the origin of new leaves and buds. The cell and the cell theory; protoplasm as the physical basis of life; protoplasmic movement; turgidity; the structure and division of the nucleus; the origin of new cells by cell division. The internal morphology of the stem of monocotyledons and of dicotyledons; the function of vascular bundles; the

cambium and the secondary thickening of stems and roots; the secondary protective tissues, cork and bark. The leaf as an organ for carrying on the process of photosynthesis; the epidermis, including spaces; photosynthesis (carbon assimilation); the nature and function of chlorophyll corpuscles and of chlorophyll; the exacuation of the products of photosynthesis and their ultimate fate. The root: its root-tip, root hairs, and mode of branching; the growing point. Climbing plants: stem-climbers and tendril climbers; the physiology of climbing; lateral geotropism, reactions to the stimulus of contact. The elementary facts in the nutrition of the plant; the nature and sources of the raw food materials; the necessary chemical elements and their mode of absorption; water cultures; the constitution of the soil; the transpiration current; transpiration; photosynthesis; the products of metabolism, together with their distribution, storage, and utilization; respiration contrasted with photosynthesis. Carnivorous plants; Drosera, Utricularia, Sarracenia, Dionaea and Nepenthes. The classification of plants, including the main sub-divisions of the vegetable kingdom; the morphology and physiology of the following Thallophyta: Protococcus (Pleurococcus), Saccharomyces (yeast), Bacteria, Spirogyra, Fucus, Mucor, Penicillium, Psalliota campestris (mushroom). Alcoholic fermentation; Bacteria as the cause of nitrogen fixation, of fermentative processes, of putrefaction, and of disease. The Bryophyta, illustrated by a moss plant; the Pteridophyta, illustrated by a fern plant; alternation of generations. Reproduction in the Phanerogamia; the flower and its chief modifications in structural plan; the minute structure of the pollen grain and of the ovule; Pollination and its agents; floral mechanism as illustrated by the Lady Slipper Orchid, Primula, Salvia, etc. Fertilization of the ovule; development of seeds and fruits; the plum, strawberry, orange, cocoanut, tc.; dispersion of seeds and fruits; the nature of pine cones, both male and female. Two hours a week.

- 3, 4. LABORATORY COURSE IN GENERAL BOTANY. This course for pre-medical students is designed to accompany courses 1, 2. One practical period of two hours per week.
- 3a, 4a. LABORATORY COURSE IN GENERAL BOTANY. This course for students in Arts and Science is designed to accompany courses 1, 2. One practical period of two hours fortnightly.
- 5, 6. Morphology and Physiology of the Flowering Plant. A lecture course of two hours per week.
- 7, 8. Laboratory Course on Morphology and Physiology of the Flowering Plant. Four hours per week.
- 9, 10. Systematic Botany of the Sporophyta and Spermatophyta. A detailed study of the structure and life-history of the more important Genera in each of the following groups: Algae, Fungi, Bacteria, Bryophyta, Pteridophyta, Gymnospermae, and the details of reproduction in the Angiospermae, together with the characters of the most common families of cultivated and native plants. A lecture course of three hours per week.
- 11, 12. A laboratory course to accompany Courses 9 and 10. Three hours per week.

- 13, 14. Systematic Botany, supplementing Courses 9 and 10, treating with classification and Genera omitted in those courses. One or two lectures a week.
- 15, 16. Laboratory work to accompany Courses 13 and 14. Four to six hours per week.
 - 17, 18. Plant Ecology. Two lectures per week.
- 19, 20. Laboratory Course designed to accompany course 17, 18. Four hours per week.
- 21. ADVANCED PLANT PHYSIOLOGY. Lecture course of two hours per week during the first term.
- 22. Advanced Practical Physiology. This course is designed to accompany course 21. Problems in plant physiology are assigned to each student. Four hours per week during the first term.
- 23. Genetics. This course is designed to deal with the principles of genetics, especially in relation to plant life. It involves a study of the laws underlying inheritance, the causes of variation, and the physical basis of heredity. Two lectures per week during the second term.
- 24. Practical Genetics. This course is designed to accompany course 23. The practical features of plant breeding are dealt with in detail and a number of experiments in hybridizing are made. Four hours per week during the second term.
- 25, 26. Palaeobotany. Two lectures per week or a reading course.
 - 27, 28. Laboratory Course designed to accompany course 25, 26.

Students intending to take any Senior Honors Division Course in Botany are expected to make themselves acquainted with the Canadian families of flowering plants during the preceding summer vacation if they have not already done so. As many different species as possible should be collected and dried. The most suitable flora to consult is Gray's New Manual of Botany. Advice with respect to collecting, drying, mounting, and naming of specimens may be obtained from members of the botanical staff.

For students taking senior courses, at the beginning of the session, there will be several excursions to the prairie, woods, and river-side for the purpose of studying the algae, fungi, and flowering plants in relation to their environment.

The laboratory of the Department will be open and encouragement given to qualified students desiring to carry on research on some botanical problem.

TEXT BOOKS

Buller: Practical Botany; Sinnott: Botany, Principles and Problems; Youngken: Pharmaceutical Botany; Sargent: Plants and their Uses; For Senior Division, Maximov: Text Book of Plant Physiology; Strasburger: Text Book of Botany; Coulter, Barnes & Cowles: Text Book of Botany, Vol. 1; R. C. Punnett: Mendelism; Holman & Robbins: Text Book of General Botany; Weaver and Clements: Plant Ecology; Babcock & Clausen: Genetics in Relation to Agriculture.

DEPARTMENT OF CHEMISTRY

Matthew A. Parker, B.Sc., LL.D., F.I.C., F.C.I.C., F.R.S.C., Professor Henry P. Armes, B.Sc., Ph.D., F.C.I.C. Associate Professor Alan N. Campbell, M.Sc., Ph.D., D.Sc., F.I.C. Assistant Professor Paul G. Hiebert, M.A., M.Sc., Ph. D., F.C.I.C. Assistant Professor A. D. Robinson, M.A., Ph. D., A.C.I.C. Assistant Professor H. H. Saunderson, B.A., M.Sc., Ph.D. Assistant Professor

CHEMISTRY I A-Courses 1a. 2a: 3a. 4a.

CHEMISTRY I—Courses 1, 2: 3, 4. (Prerequisite, Grade XI Chemistry.) CHEMISTRY II—Courses 5, 6; 7, 8. (Prerequisite, Grade XII Chemistry or Chemistry I or Chemistry I A.)

CHEMISTRY II M*—Courses 9, 10; 11, 12. (Prerequisite, Grade XII Chemistry, Chemistry I or Chemistry I A.)

CHEMISTRY III—Courses 15, 16: 17, 18. (Prerequisite, Chemistry II.) CHEMISTRY III S—Selected parts of Courses 5, 6; 7, 8; 15, 16; 17, 18. (Prerequisite, Chemistry II M complete.)

CHEMISTRY IV—Courses 19, 20; 21, 22.† (Prerequisites, Chemistry III and Physics I.)

CHEMISTRY IV H—Courses 19, 20; 21, 22; 23, 24; 25, 26; 29, 30. (Prerequisites, Chemistry III, Mathematics II or General Science Mathematics and Physics I.)

CHEMISTRY V-Any two of Courses 31, 32; 33, 34; 35, 36; and, in addition, either 39, 40; or 41, 42. (Prerequisite for 35, 36, Mathe-

First Year Pharmacy (Degree and Diploma Course) — Courses 1, 2;

Second Year Pharmacy (Degree Course) - Courses 15, 16; 11, 12. Third Year Pharmacy (Degree)—Courses 19, 20: 21, 22: 23, 24: 25, 26. Fourth Year Pharmacy (Degree)—Courses 31, 32: 39, 40.

First Year Engineering—Course 13, 14,

Fourth Year Electrical Engineering—Course 37.

Students intending to enter courses in Chemistry in the Senior Honors Division in Science are advised to consult pages 40-41 for guidance as to choice of subjects in the Junior Division and in the First Year of the Senior Division.

N.B.—For key to system of numbering courses, see page 5.

The following courses are given:

1a, 2a. ELEMENTARY INORGANIC CHEMISTRY. An introductory course leading up to the study of the fundamental principles of Chemistry; elements and compounds; laws of combination; atoms and molecules; acids, bases, salts; properties of some common elements and their more important compounds. The subject is treated

^{*}For students requiring standing for entrance to Medicine in two years. Others are advised to obtain pre-medical standing by completing courses in Chemistry II and the stry III.

It is highly desirable that students taking Course 21, 22, should have standing in Mathematics II, or General Science Mathematics, see page 30 or page 42.

in an elementary way. Text book recommended, "General Chemistry," by H. N. Holmes." Two hours per week lectures, and one hour tutorial.

- 1, 2. ELEMENTARY INORGANIC CHEMISTRY. Fundamental principles of chemistry; elements and compounds; laws of combination; atoms and molecules; acids, bases, salt; properties of some common elements and their more important compounds. The subject is treated in an elementary way. Text book recommended, "General Chemistry," by H. N. Holmes. Two hours per week lectures, and one hour tutorial.
- 3a, 4a. Practical Chemistry. Experiments illustrating general principles and the preparation and properties of substances studied in Course 1a, 2a. One period of three hours per week of practical work and one period of three hours per week of combined tutorial and practical work.
- 3, 4. PRACTICAL CHEMISTRY. Experiments illustrating general principles and the preparation and properties of substances studied in Course 1, 2. One period of three hours per week.
- 5, 6. Inorganic Chemistry. A continuation of Course 1, 2, dealing with some of the more general subjects barely touched on in the elementary course. Two hours per week lectures. Text book to be announced.
- 7, 8. Inorganic Analysis. A laboratory course in qualitative inorganic analysis and introductory quantitative analysis. Two periods of three hours per week.
- 9. INORGANIC CHEMISTRY. A continuation of the elementary course, designed for students entering medicine. Three lectures per week, first term only. Text book, General Chemistry, by Schlesinger.
- 10. Organic Chemistry. An introductory course for students entering medicine. Three lectures per week, second term. Text book, J. B. Cohen's Theoretical Organic Chemistry.
- 11, 12. Laboratory Class for Courses 9 and 10. Qualitative analysis; gravimetric and volumetric analysis; reactions of some organic substances; organic preparations. Two periods of three hours each, per week.
- 13, 14. QUANTITATIVE ANALYSIS leading up to methods of water analysis, coal analysis, etc., of interest to engineering students. One period of three hours per week.
- 15, 16. Organic Chemistry. An introduction to the study of organic chemistry. General principles; fatty compounds; some typical carbocyclic and a few heterocyclic compounds. Two hours per week. Text book recommended, Perkin and Kipping's Organic Chemistry.
- 17, 18. Practical Organic Chemistry. Preparation of organic compounds and study of their properties. Two periods of three hours per week.

Senior students will find it useful to have a copy of the "Handbook of Chemistry and Physics," issued by the Chemical Rubber Publishing Co.

- 19, 20. INORGANIC ANALYSIS. A laboratory course in continuation of Course 7, 8. Two periods of three hours per week, including one hour lecture demonstration.
- 21, 22. Physical Chemistry. Introduction to Physical Chemistry. Two hours per week lectures. (It is highly desirable that students attending this course should have standing in Mathematics II, or its equivalent.) Text book, Getman and Daniells, Theoretical Chemistry, or Findlay: Introduction to Physical Chemistry.
- 23, 24. Practical Physical Chemistry. Physico-chemical measurements. A laboratory course. One period of three hours per week. Text book, Daniells, Mathews and Williams, Experimental Physical Chemistry.
- 25, 26. COLLOID CHEMISTRY. An introductory course on the chemistry of colloids, consisting of one lecture per week and one practical period per week throughout the session.
- $29,\,30.$ Theory of Chemical Analysis. A course dealing with the theory of the technique and processes of analytical chemistry. One hour per week.
- 31, 32. Advanced Organic Chemistry. An advanced course on Theories, Reactions and Methods of Organic Chemistry. Two hours per week.
- 33, 34. Advanced Inorganic Chemistry. Chiefly descriptive inorganic chemistry; subjects chosen with reference to literature available in the Library. Two hours per week.
- 35, 36. Advanced Physical Chemistry. A course consisting of one lecture per week (first term), two lectures per week (second term), and one practical period per week throughout the session. The lecture course forms a continuation of Course 21, 22, giving particular attention to electrochemical theory and thermodynamics. The laboratory course includes electro-chemical and other advanced physico-chemical measurements. Text books, Findlay, Introduction to Physical Chemistry; Daniells, Mathews and Williams, Experimental Physical Chemistry. (Mathematics II is a prerequisite for this course.)
- 37. Electro-Chemistry. Theories and laws relating to practical applications of electro-chemical processes. Two hours per week first term. Text book recommended, Mantell "Industrial Electro-Chemistry."
- 39, 40. Advanced Practical Organic Chemistry. Methods of organic analysis; organic preparations. Four periods of three hours per week.
- 41, 42. Advanced Practical Inorganic Chemistry. Methods of inorganic analysis, a continuation of Course 19, 20. Four periods of three hours per week.
- 43, 44. BIOCHEMISTRY. The lecture course (only) as provided for third year students of Agriculture and Home Economics. The course consists of two lectures per week throughout the session, and is of the value of two units of credit. It may be taken as an extra, or in conjunction with another two-unit course. Prerequisite, Chemistry III or Chemistry II M.

45, 46. A course of lectures on Phase Rule, suitable for M.Sc. students, is given when required. Text book: Findlay, "The Phase Rule."

Special students may be enrolled for the purpose of carrying on such advanced work as the equipment permits of, and special facilities will be given to those capable of engaging in research work.

Each student is supplied with such apparatus as may be required, with the exception of platinum wire and foil, laboratory towel, etc., which he must provide for himself.

A deposit of five dollars is paid to the Bursar at the beginning of each session, and all breakages will be made good out of this.

A record of all laboratory work must be kept in regulation report books. These are examined periodically during the session, and must be handed to the examiners in chemistry previous to the practical examination at the end of the session.

Attention is called to the regulation regarding practical work and reports on page 125.

DEPARTMENT OF CLASSICS

F. W. Clark, B.A., Ph. D. Professor of Latin and Greek W. M. Hugill, B.A., Ph.D. Assistant Professor of Latin and Greek Skuli Johnson, M.A. Assistant Professor of Latin and Greek

GREEK

GREEK IA—Courses 1, 2.

GREEK II—Courses 3, 4. (Prerequisite, Matriculation Greek or Greek I).

*GREEK II A—Courses 5, 6.

GREEK III—Courses 5, 6, 11, 12. (Prerequisite, Greek II.)

GREEK III H—Courses 5, 6, 11, 12, 13, 14. (Prerequisite, Greek II.)

GREEK IV—Courses 5, 6, 11, 12. (Prerequisite, Greek III.)

GREEK IV G—Courses 5, 6, 11, 12, 17, 18. (Prerequisite, Greek III.)

GREEK IV H—Courses 5, 6, 11, 12, 17, 18. (Prerequisite, Greek III.) GREEK V H—Courses 17, 18, 19, 20. (Prerequisite, Greek IV H).

- 1. Beginners' Greek Course. This course is intended for students who have not had the opportunity of taking Greek for Matriculation. The purpose is to prepare students as rapidly as possible for the reading of Greek. White, First Greek Book (Ginn & Co.). Lessons I-XXX. Four hours a week.
- 2. Beginners' Greek Course. Continuation of Course I. White, First Greek Book. Lessons XXXI-LIX, omitting XLVIII and LVIII; and Xenophon, Easy Selections from Xenophon, pages 1-20 (Phillpotts and Jerram, Oxford Press). Sight translation. Four hours a week.

^{*}GREEK II A is to be taken by Second Year students, who, entering with Matriculation Greek, have taken Greek II in the First Year.

- 3. (a) White, First Greek Book, lessons 60-65, 67, 77, 80.
- (b) XENOPHON, Easy Selections from Xenophon (Phillpotts and Jerram, Oxford Press), chapters 3, 4, 5. Sight translation. Four hours a week.
- 4. A GREEK READER, edited by Freeman and Lowe (Oxford Press). The following selections will be read: *Lucian*, *Herodotus* (omitting sections 26-32), *Thucydides*, *Xenophon* (omitting sections 96-111), *Plato*. Sight translation. Four hours a week.
- 5. Lucian, Charon (Heitland, Cambridge Press). Homer, Odyssey VI and IV (Merry, Books I-XII, Oxford Press). Sight translation. Three hours a week.
- 6. Plato, *Apology* (Stock, Oxford Press). Sophocles, *Ajax* (Pearson, Cambridge Press). The choral odes will be read in translation. Sight translation. Three hours a week.
- 7. Demosthenes, *Philippic I* (Gwatkin, Macmillan). Homer, *Iliad* XXII and XXIV (ll. 281-724). (Monro, Oxford Press). Sight translation. Three hours a week. (Not given in 1937-38).
- 8. Lucian, Vera Historia, Book II (Jerram, Oxford Press). Euripides, Medea (Bayfield, Macmillan). The choral odes will be read in translation. Sight translation. Three hours a week. (Not given in 1937-38).
- 9. GREEK ANTIQUITIES. Greek private life, education, religion, national games; the public buildings of Athens. Assigned readings and reports. One hour a week. (Not given in 1937-38).
- 10. Greek Drama in Translation. The following plays: Aeschylus, Agamemnon (Murray); Sophocles, Oedipus, The King and Antigone (Murray); Euripies, Iphigenia in Tauris (Murray); Aristophanes, Plutus (Sanford). These plays are all found in Ten Greek Plays, translated by Gilbert Murray and others (Oxford Press). One hour a week. (Not given in 1937-38).
- 11. Greek History. Bury's *History of Greece*, chapter IV (p. 180) to IX. Lectures and readings on the period from 500 B.C. to 431 B.C. The Persian Wars, the development of the democracy in Athens and the growth of the Athenian Empire. Special topics and papers will be assigned. One hour a week.
- 12. Greek History. Continuation of 11, involving a study of Bury's *History of Greece*, chapter X to XVII, omitting XV. Lectures and readings on the period from 431 B.C. to 338 B.C. The Peloponnesian War, the Spartan and Theban hegemonies, the rise of Philip of Macedon and the campaigns of Alexander. Special topics and papers will be assigned. One hour a week.
- 13, 14. (a) Euripides, Hecuba (Bond and Walpole, Macmillan). (b) Homer, $Iliad\ I$ and VI (Seymour, Ginn & Co.) Two hours a week.
- 15. Homer, *Odyssey* (Merry, Oxford Press). Books XVI, XXI, XXIII. Herodotus (Shuckburgh, Cambridge Press). Book VI, chapters 1-8, 10-21, 25-31, 34-51, 73-82, 84-136. Sight translation. Four hours a week. (Not given in 1937-38).
- 16. Sophocles, *Antigone* (Shuckburgh, Cambridge Press). Aristophanes, *Clouds* (Merry, Oxford Press). Sight translation. Four hours a week. (Not given in 1937-38).

- 17. Plato, Protagoras (Adam, Cambridge Press). Lysias, Eratosthenes (Thompson and Mills, University Tutorial Press). Sight translation. Four hours a week.
- 18. Aeschylus, *Prometheus Bound* (Prickard, Oxford Press). Aristophanes, *Acharnians* (Merry, Clarendon Press). Theocritus, *Idyls* 6, 7, 13, 15, 18, 28 (Kynaston, Oxford Press). Sight translation. Four hours a week.
- 19. THUCYDIDES, Book VII (Marchant, Macmillan). Sight translation. Four hours a week.
- 20. Plato, Crito (Adam, Cambridge Press). Phaedo (Burnet, Oxford Press). Sight translation. Four hours a week.
 - M.A. Courses will be outlined by the Department on request.

LATIN

LATIN I—Courses 1, 2. (Prerequisite, Matriculation Latin).

LATIN II—Courses 3, 4. (Prerequisite, Latin I).

LATIN III—Courses 5 and 6 or 7 and 8; 11, 12. (Prerequisite, Latin II).

LATIN III H—Courses 5 and 6 or 7 and 8; 11, 12, 13, 14. (Prerequisite, Latin II).

LATIN IV—Courses 5 and 6 or 7 and 8; 15, 16. (Prerequisite, Latin III).

LATIN IV G—Courses 5, 6, 7, 8, 15, 16, 19, 20. (Prerequisite, Latin III).

LATIN IV H—Courses 7, 8, 15, 16, 19, 20, 23, 24. (Prerequisite, Latin III).

LATIN V H—Courses 7 and 8 or 23 and 24; 19, 20, 21, 22. (Prerequisite, Latin IV H).

(For purposes of examination the courses in Latin are in each year regarded as continuous.)

- 1. (a) LATIN PROSE AND POETRY, edited by Bonney and Niddrie (Ginn and Co., Montreal). The selections from Gellius, Eutropius and Phaedrus.
- (b) LATIN PROSE. The following constructions: the common case usages; indirect statements; purpose and result clauses; participles; direct and indirect questions; direct and indirect commands; intransitive verbs.

For the discussion of these constructions students are referred to any one of the standard Latin Grammars such as those of *Bennett; Allen and Greenough; D'Ooge;* or to such books on Latin Prose Composition as those of *North and Hillard, Tracy and Law,* and *Pilsbury.*

The vocabulary on which the sentences for examination will be based is confirmed to *A Latin Word List*, procurable at the University Book Store.

- (c) ROMAN LIFE. Every Day Life in Rome, chapters 1-6. (Treble and King, Oxford Press.)
 - (d) SIGHT TRANSLATION.

- 2. (a) LATIN PROSE AND POETRY. Nepos, selections 1, 2, 4, 5, 6, 8, 9, 10, 11; Livy, selections 4, 7, 8, 10, 11; Ovid, selections 1, 2, 3, 6, 7, 8, 10.
- (b) Latin Prose. The following constructions: gerund and gerundive; temporal clauses; causal clauses; conditional clauses (regular types); subordinate clauses in indirect narration; verbs of fearing and preventing.

(For vocabulary, etc., see under 1. (b).

- (c) ROMAN LIFE. Every Day Life in Rome, chapters 7-21.
- (d) SIGHT TRANSLATION.

Four hours a week.

(Marks will be allotted as follows: Translation and subject matter of prescribed authors, 40%; Grammar and Prose, 30%; Roman Life, 15%; Sight Translation, 15%.)

- 3. (a) LATIN PROSE AND POETRY, edited by Bonney and Niddrie (Ginn and Co., Montreal). Selections from *Cicero*, except VI (p. 139) and Letters I and V; *Pliny* (complete); *Martial* (complete); *Virgil*, pages 217-240, except extract I (page 227).
- (b) Roman History. Short History of Rome, chapters 1-6, (Abbott, Scott, Foresman & Co.)
 - (c) SIGHT TRANSLATION.

Four hours a week.

4. (a) Livy, Book XXV, chapters 7-11, 16, 17, 23-31, 40, 41. (Monro, Oxford Press.)

A Book of Latin Poetry (edited by Neville, Jolliffe, Dale and Breslove; Macmillan, Toronto). Selections from *Horace*, pp. 42-53.

- (b) Roman History. Short History of Rome, chapters 7-15.
- (c) SIGHT TRANSLATION.

Four hours a week.

(Marks will be allotted as follows: Translation of prescribed authors with questions on syntax, grammar and subject matter, 60%; Roman History, 25%; Sight Translation, 15%.)

Students who elect Latin as a subject in the Third and Fourth Years should provide themselves with: A Latin Dictionary (Lewis' Latin Dictionary for Schools, Oxford Press), Latin Literature (Mackail, Murray), A. Classical Atlas (Atlas of Classical Geography, Everyman's Library.)

In all author papers of the Senior Division, $25\,\%$ is assigned to Sight Translation.

5, 6. Prose Composition. Bradley-Arnold, Latin Prose Composition (Longmans, Green & Co.) One hour a week.

Students taking Latin IV G are offered an option between Prose Composition and additional reading in some Latin Author. The selected Author for 1937-38 is CAESAR, Bellum Gallicum, Book VII.

7, 8. Roman Antiquities. Course of lectures particularly on Roman Private Life and on the Topography and Buildings of Ancient Rome, illustrated by lantern slides. Text book: Showerman, Rome and the Romans, Parts II and III (Macmillan). The Roman buildings selected for study are intended to illustrate particularly the structure and function of the temple, basilica, circus, theatre, amphitheatre, and baths. The requirement in topography includes the drawing of a plan of Rome, its hills and the Tiber, and locating on this plan the

chief public buildings together with such main streets as the Argiletum, the Sacred, Appian and Flaminian Ways, and the circuit of the Servian Wall. Books to which the student will be referred are: Johnston, Private Life of the Romans; Rogers and Harley, The Life of the Romans (translated); Jones, Companion to Roman History; Tucker, Life in the Roman World of Nero and St. Paul; Sandys', Companion to Latin Studies; Platner, Ancient Rome; Fowler, Social Life of Rome in the Days of Cicero. One hour a week.

- 9, 10. Roman History. A general course dealing with the main events in the history of Rome from the foundations of the Republic down to the end of the first century of the Empire, and with the contribution of Rome to later civilizations. Frank, History of Rome. Some valuable books for reference and study of special topics are: How and Leigh, History of Rome to the Death of Julius Caesar; Fowler, Rome; Boak, History of Rome; Jones, The Roman Empire; Taylor, Constitutional and Political History of Rome; Bailey, The Legacy of Rome. One hour a week. (Not given in 1937-38).
- 11. (a) Martial, Select Epigrams, Volume I, ed. by Bridge and Lake (Oxford Press). I: 3, 10, 13, 15, 16, 19, 20, 29, 30, 32, 33, 38, 47, 52, 75, 98, 117; II: 11, 16, 18, 27, 30, 69, 77, 90; III: 4, 12, 14, 15, 19, 38, 44, 52, 60, 63; IV: 3, 8, 18, 27, 37, 41, 44, 86; V: 8, 9, 25, 34, 43, 47, 49, 56, 58; VI: 8, 17, 35, 57, 59, 82, 86.

CICERO, Pro Archia (Nall, Macmillan) and De Amicitia, chapters 1, 4-8, 18, 23, 27. (Shuckburgh, Macmillan.)

(b) SIGHT TRANSLATION.

Three hours a week.

12. (a) PLINY, Letters, 4, 17, 23, 32, 35, 39, 47, 59, 69, 73, 75, 82, 90, 91. (Prichard and Bernard, Oxford Press.)

A Book of Latin Poetry. *Horace*, as found or pages 10-22, 54-56, 71-86; and *Tibullus*, pages 93-95 (Neville, Jol. fe, Dale and Breslove, Macmillan Co., Toronto).

(b) SIGHT TRANSLATION.

Three hours a week.

- 13, 14. (a) CICERO, De Senectute (Shuckburgh, Macmillan Co.)
- (b) Horace, Odes I-III (Bennett and Rolfe, Allyn and Bacon).
 Two hours a week.
- 15. (a) Virgil, Georgics, I, lines 118-146; 287-310; 463-514; II, 136-176; 452-542; IV, 68-87; 116-190; 460-515. Eclogues, I and IV. (Sidgwick, Cambridge Press.)

LATIN PROSE LITERATURE. Selections 17-20, 24-28, 64, 65, 80-84.

(Avery, Little, Brown and Co.)
(b) Sight Translation.

Three hours a week.

16. (a) Virgil, Aeneid IV, and VI from 264 to end. (Sidgwick, Cambridge Press or Page, Macmillan).

LATIN PROSE LITERATURE. Selections 4, 7, 8, 73, 79, 85.

(b) Sight Translation. Three hours a week.

17. CICERO, Letters 3, 4, 9, 10, 12, 14, 15, 17, 20, 21, 23, 26, 28, 29, 34-47, 40, 41, 44-46, 51, 53, 58, 64. (Prichard and Bernard, Oxford Press.)

ELEGIAC POETS, Tibullus I: 1, 3. Propertius I: 2; II: 10, 12, 13; III: 7; IV: 6, 11 (II. 1-4, 73-102). Ovid, Amores I: 15; II: 6; III: 9, 15. (Roman Elegiac Poets, Harrington, American Book Co.) Three hours a week. (Not given in 1937-38).

- 18. (a) Virgil, Aeneid VII and XII (Sidgwick, Cambridge Press). Cicero, De Senectute (Bennett, Allyn and Bacon, or Huxley, Oxford Press). Three hours a week. (Not given in 1937-38).
- 19. PLAUTUS, Captivi (Elmer, Allyn and Bacon). TERENCE, Andria (Freeman and Sloman, Oxford Press). Three hours a week.
- 20. Livy. Approximately 1,500 lines from Livy, edited by Westcott (College Latin Series, Allyn and Bacon). Tacitus. Agricola, edited by Furneaux-Anderson (Oxford Press). Three hours a week.
- 21. Lucretius, *De Rerum Natura* I: 1-448; III: 1-230 and 830-1094; V: 1-234 and 925-1240. (Duff, Cambridge Press.)

Horace, Satires I: 1, 4, 6; II: 1, 6, 8; Epistles I: 1, 6, 12, 13, 14, 16; Ars Poetica. (Bennett and Rolfe, Allyn and Bacon). Four hours a week.

22. TACITUS, Annals I and II. (Abridged edition by Furneaux, Oxford Press.)

JUVENAL, Satires 1, 3, 10. (Hardy, Macmillan.) Four hours a week.

 $23,\,24.\,$ Latin Prose Composition. Translation of passages from representative English authors. One hour a week.

M.A. Courses will be outlined by the Department on request.

GRAECO-ROMAN CIVILIZATION

GREEK CIVILIZATION—Courses 1, 2. ROMAN CIVILIZATION—Courses 3, 4.

Knowledge of the Greek and Latin languages is not required. These courses are intended to make students acquainted with Hellenic and Latin culture and with the contribution made by the Greeks and Romans to subsequent civilization.

1, 2. GREEK CIVILIZATION:

(a) POLITICAL AND CONSTITUTIONAL HISTORY. Chief emphasis will be placed on the period 479-323 B.C. The following topics will be emphasised: the Homeric age; age of settlements; Greek tyrants; Persian wars; the Athenian empire; the age of Pericles; the Peloponnesian war and the aftermath; rise of Macedon and the age of Demosthenes; spread of Hellenism; Greeks in the West; democracy and other modes of government; attempts at federation and international arbitration; the Greek city-state.

Students should possess Bury, History of Greece. Selected bibliography: Greenidge, Handbook of Greek Constitutional History; Zimmern, Greek Commonwealth; Abbott, Pericles and the Golden Age of Athens; Grundy, The Great Persian War; Henderson, The Great War Between Athens and Sparta; Tarn, Hellenistic Civilization; Fowler, City State of the Greeks and Romans; Cambridge Ancient History.

(b) Society and Art. The following topics will be emphasised: Physical environment: geography and climate; Private life: house, dress, food, family, marriage, childhood; Status of women; Social tructure and slavery; Occupation and vocation: agriculture, trade,

industry, labour, professions; Wealth and poverty: liturgies and payment for public service; Education: theory and practice; Religion: pantheism, ritual, divination, the mysteries, rationalism, mythology; Festivals: athletic and dramatic; Art: temples, sculpture, vases.

BIBLIOGRAPHY: Whibley, Companion to Greek Studies; Tucker, Life in Ancient Athens; Davis, A Day in Old Athens; Gulick, Life of the Ancient Greeks; Dickinson, Greek View of Life; Glotz, Ancient Greece at Work; Zimmern, Greek Commonwealth; Freeman, Schools of Hellas; Nettleship, Theory of Education in Plato's Republic; Burnet, Aristotle on Education; Zielinski, Religion of Ancient Greece; Gardiner, Athletics of the Ancient World; Weller, Athens and its Monuments; Hege and Rodenwaldt, The Acropolis; Beazley and Ashmole, Greek Sculpture and Painting to the End of the Hellenistic Period; Richter, Shapes and Names of Athenian Vases; Fowler and Wheeler, Greek Archaeology.

(c) LITERATURE. Selections from the poets and prose writers. Poetry: Epic Poetry, Homer; Lyric Poetry and Pindar; Tragedy and Comedy, Aeschylus, Sophocles, Euripides, Aristophanes (at least one play from each); Pastoral Poetry, Theocritus, Bion and Moschus.

Prose: History, Herodotus, Thucydides, Xenophon; Philosophy, Plato, Aristotle; Literary Criticism, Aristotle; Oratory, Demosthenes, Isocrates; Satirical Dialogue, Lucian.

Students should possess Howe and Harrer, Greek Literature in Translation.

BIBLIOGRAPHY: Murray, Ancient Greek Literature; Livingstone. Pageant of Greece; The Legacy of Greece; Norwood, Greek Tragedy, Greek Comedy; Sheppard, Greek Tragedy; Haigh, Tragic Drama of the Greeks; the appropriate volumes in the series Our Debt to Greece and Rome.

Preparation of reports and essays will be required as an integral part of the work of the course. Given in 1937-1938. Four hours a week.

3, 4. ROMAN CIVILIZATION:

(a) POLITICAL AND CONSTITUTIONAL HISTORY from the beginning of the Republic to the end of the second century A. D. Particular emphasis will be laid on the following topics: the early Republic; the struggle between the orders; the conquest of Italy; Roman supremacy in the Mediterranean; the Gracchi; the Sullan regime; transition from Republic to Empire; the dyarchy; the early Empire; the good emperors; Roman contributions to civilization.

Students should possess Frank: A History of Rome. Among the books to which reference will be made are: Pelham, Outlines of Roman History; Fowler, Julius Caesar; Strachan-Davidson, Cicero; Arnold, Roman Provincial Administration; Jones, The Roman Empire; Marsh, History of the Roman World from 146 to 30 B.C.; Rostovtzeff, Social and Economic History of the Roman Empire; Bailey (editor), The Legacy of Rome.

(b) The City and the People. Topography and structural development; hills, rivers, sewers, streets, bridges, aqueducts, fora; Private Life: house, dress, food, family, marriage, burial; Education: schools, writing, books, libraries; Occupation and vocation: agriculture, trade, industry, labour, professions; Wealth and Pov-

erty: imperial exploitation, the dole; Travel: roads, transportation; Religion: native and foreign cults, priests, vestals; Amusements: circensian, dramatic, gladiatorial; Architecture: temple, basilica, circus, theatre, amphitheatre, baths; Art: painting, mosaic, sculpture.

BIBLIOGRAPHY: Sandys, Companion to Latin Studies; Jones, Companion to Roman History; Platner, Topography and Monuments of Ancient Rome; Showerman, Rome and the Romans; Moore, The Roman's World; Johnston, Private Life of the Romans; Tucker, Life in the Roman World of Nero and St. Paul; Fowler, Social Life at Rome in the Days of Cicero; Rogers and Harley, Life of Rome; Louis, Ancient Rome at Work; Carrington, Pompeii; Davis, Influence of Wealth in Imperial Rome.

(c) Literature. Selections from the poets and prose writers. Epic Poetry, Virgil, Lucan; Lyric Poetry, Horace, Catullus; Elegiac Poetry, Tibullus, Propertius, Ovid; Drama, Plautus, Terence, Seneca; Satire, Horace, Juvenal; History, Livy, Tacitus; Philosophy, Lucretius, Cicero; Letter Writing, Cicero, Pliny, Seneca; Literary Criticism, Horace, Quintilian; The Novel, Petronius, Apuleius; Oratory, Cicero.

Students should possess Howe and Harrer, Roman Literature in Translation.

BIBLIOGRAPHY: Bailey (editor), The Mind of Rome; Duff, Literary History of Rome in the Golden Age; Duff, Literary History of Rome in the Silver Age; Rose, Handbook of Roman Literature; The appropriate volumes in the series, Our Debt to Greece and Rome; MacKail, Latin Literature.

Preparation of reports and essays will be required as an integral part of the work of the course. Given in 1938-39. Four hours a week.

DRAWING

Milton Smith Osborne, B.Arch., M.Sc.

(Arch.) _____Professor of Architecture

John A. Russell, B.Sc. (Arch.),
M.Arch.
Assistant Professor of Architecture
Architectural Drawing I—Courses 3, 4; 5, 6. (Available only with
Mathematics IA.)

N.B.—For key to system of numbering courses, see page 5.

- 3, 4. Elements of Architecture. A study of the elements of buildings derived from classic precedent, including the Greek and Roman orders; architectural lettering; the principles and methods of architectural drawing and rendering in wash, illustrated by problems in the orders and elementary composition. Lectures, one hour per week; practical work, three hours per week; two terms.
- 5. Shades and Shadows. Planned to give the fundamental knowledge necessary for casting the conventional shadows employed in architectural design. Given by means of drawing-room work in the nature of test-exercises based on lectures and text book preparation. Lectures, one hour per week; practical work, three hours per week; first term. Gardner, "Notes on Shades and Shadows."

6. Perspective. A brief, intensive course to familiarize the student with the fundamental phenomena of perspective, and to provide him with an easy and direct method of constructing perspective views of objects and buildings. Also given by means of drawing-room exercises in the nature of test exercises based on lectures and text book preparation. Lectures, one hour per week; practical work, three hours per week; second term. Freese, "Perspective Projection."

DEPARTMENT OF ENGLISH

| E. K. Brown, B.A., D. ès Lett. | Professor |
|----------------------------------|---------------------|
| Aaron J. Perry, M.A. | Professor |
| W. T. Allison, M.A., Ph.D. | Professor |
| R. Fletcher Argue, M.A. | Assistant Professor |
| Clark R. Hopper, M.A. | Assistant Professor |
| A. Lloyd Wheeler, M.A., Ph.D. | Assistant Professor |
| Doris B. Saunders, M.A., B.Litt. | Lecturer |

ENGLISH I—Courses 1, 2. (Prerequisite, Matriculation English.)

ENGLISH II—Courses 3, 4. (Prerequisite, English I.)

ENGLISH II A—Courses 3, 4, (Prose). (Prerequisite, English I.)

ENGLISH III—Courses 5, 6, 7, 8. (Prerequisite, English II.)

ENGLISH III H—Courses 5, 6, 7, 8, 9, 10. (Prerequisite, English II.)

ENGLISH IV—Courses 11, 12, 13, 14. (Prerequisite, English III.)

ENGLISH IV G—Eight of Courses 11, 12, 13, 14, 15, 16, 17, 18, 19, 20. (Prerequisite, English III.)

ENGLISH IV H—Eight of Courses 11, 12, 13, 14, 15, 16, 17, 18, 19, 20. (Prerequisite, English III.)

English V—Courses 21, 22, 23, 24, 25, 26, 27, 28. (Prerequisite, English IV H.)

Note—Students may substitute for any two of the above units, except 27, 28, the two units not elected in English IV H.

Every student should own a good English Dictionary. The Concise Oxford Dictionary is recommended.

N.B.—For key to system of numbering courses, see page 5.

1, 2. Introductory Course: A study of three types of literature—fiction, drama and poetry—and of the principles of composition. Texts: Euripides: The Bacchae (Gilbert Murray's translation, Allen & Unwin); Shakespeare: Antony and Cleopatra (Arden, Heath); Shaw: Caesar and Cleopatra (Constable); Synge: The Playboy of the Western World (Allen & Unwin); Galsworthy: The Silver Box; Jane Austen: Pride and Prejudice (Everyman); Hardy: The Return of the Native (Scholar's Library, Macmillan); Willa Cather: Death Comes for the Archbishop (Mod. Lib.); Wordsworth: Tintern Abbey, There Was a Boy, She Dwelt Among the Untrodden Ways, I Travelled Among Unknown Men, A Slumber Did My Spirit Seal, I Wandered Lonely As a Cloud, She Was a Phantom of Delight, Inflence of Natural Objects, Michael, The Green Linnet, The Solitary Reaper, Ode to Duty, Personal Talk, Sonnets; Browning: Cavalier Tunes, My Last

Duchess, The Lost Leader, Home Thoughts from Abroad, Home Thoughts from the Sea, Love Among the Ruins, The Grammarian's Funeral, Fra Lippo Lippi, Rabbi Ben Ezra, Confessions, Prospice, Epilogue; Modern Poetry, 1922-1934, (ed. Wollman, Macmillan); Thomas, Manchester and Scott: Composition for College Students (Macmillan). The selections from Wordsworth and Browning are to be found in Representative Poetry, Vol. II, (edited by members of the Department of English of the University of Toronto).

References: Histories of English Literature, by Buchan, Broadus, and Legouis.

3, 4. Greater English Poets and Prose Writers.

(a) Chaucer: The Prologue to the Canterbury Tales, Il. 118-269, 445-566; Shakespeare Sonnets, XVIII, XXIX, CXVI, CXXX, Songs from Plays, King Lear; Milton: Nativity Ode, Lycidas, Sonnets, Paradise Lost, Bk. I, Bk. II, 927-1005, Bk. III, 1-55, Bk. IV, 246-340, 598-668, Bk. IX, 1-47; Pope: The Rape of the Lock, Epistle to Dr. Arbuthnot; Shelley: Hymn to Intellectual Beauty, Lines Written Among the Euganean Hills, The Indian Serenade, Ode to the West Wind, To a Skylark, To the Moon, Adonais, Chorus from Hellas, To Night, One Word Is Too Often Profaned, When the Lamp is Shattered; Keats: On First Looking into Chapman's Homer, Lines on the Mermaid Tavern, Hyperion, Bk. I, The Eve of St. Agnes, Bright Star, Would I Were Steadfast as Thou Art, Ode to Psyche, Ode On a Grecian Urn, To the Nightingale, To Autumn, La Belle Dame Sans Merci; Arnold: The Forsaken Merman, Shakespeare, Memorial Verses, The Future, Lines Written in Kensington Gardens, The Scholar-Gipsy, Thyrsis, Philomela, Requiescat, Isolation—To Marguerite, To Marguerite—Continued, Dover Beach, Sohrab and Rustum; Swinburne: Choruses from Atalanta in Calydon, The Garden of Proserpine, Hertha, The Pilgrims, A Forsaken Garden, The Roundel.

Note: The Shakespearian play is to be read in the new Hudson edition (published by Ginn), Sohrab and Rustum in the edition published by Houghton Mifflin. All the other selections prescribed are to be found in Representative Poetry, Vols. I and II (University of Toronto Press).

(b). Sir Thomas Browne: Religio Medici (Everyman); Addison: Select Essays of Addison (ed. Thurber, Allyn and Bacon); Boswell: A Shorter Boswell (ed. Bailey, Nelson's Classics); Lamb: Essays of Elia (King's Treasuries); Macaulay: History of England, Chap. III (King's Treasuries); Carlyle: Signs of the Times, Essay on Burns, Inaugural Address at Edinburgh (Everyman); Ruskin: The Nature of Gothic, Inaugural Lecture, Traffic (ed. Roe, Scribner's); Arnold: Civilization in the United States, The Study of Poetry, The Function of Criticism, Literature and Science (ed. Brown, Macmillan); Huxley: On the Advisableness of Improving Natural Knowledge, A Liberal Education, On a Piece of Chalk, Science and Art in Relation to Education (ed. Barry, Macmillan).

References as in Courses 1, 2.

5. CHAUCER AND SPENSER.

(a) Chaucer: The Canterbury Tales: The Prologue, The Knight's Tale, The Wife of Bath's Prologue and Tale, The Squire's Tale, The Franklin's Tale, The Pardoner's Prologue and Tale, The Prioress's Tale, Sir Thopas, The Nun's Priest's Tale. Text: Canterbury Tales, edited by John M. Manly (Holt).

(b) Spenser: Faery Queene, Book I, edited by G. W. Kitchin (Oxford).

References: The Poetry of Chaucer, by R. K. Root (Houghton Mifflin), A Chaucer Handbook, by R. D. French (Crofts), Chaucer and His Poetry, by G. L. Kittredge (Harvard University Press), Some New Light on Chaucer, by John M. Manly (Holt), Geoffrey Chaucer, by John L. Lowes (Houghton Mifflin), Chaucer's Complete Works, edited by F. N. Robinson (The Cambridge Poets, Houghton Mifflin).

6. Shakespeare: Richard III, As You Like It, King Lear, Othello, The Tempest (New Hudson Shakespeare, Ginn); Introduction to Shakespeare, by MacCracken and others (Macmillan); A Life of Shakespeare, by J. Q. Adams (Houghton Mifflin).

References: A Life of Shakespeare, by Sidney Lee (Macmillan); History of English Dramatic Literature, by A. W. Ward (Macmillan); Elizabethan Drama, by F. E. Schelling (Houghton Mifflin); Shakespearian Tragedy, by A. C. Bradley (Macmillan); Shakespeare Studies, by E. E. Stoll (Macmillan).

- 7, 8. ENGLISH LITERATURE OF THE SEVENTEENTH AND EIGHTEENTH CENTURIES. Bacon: The New Atlantis (World's Classics); Fuller: Selections (ed. Broadus, Oxford University Press); Milton: Areopagitica, in Selected Essays (ed. Lockwood, Houghton Mifflin), Samson Agonistes, in Representative Poetry, Vol. I; selections from Paradise Lost, in Selections from Milton (ed. Hanford, Houghton Mifflin); selections from Jonson, Donne, Herrick, Herbert, Lovelace, Crashaw, Cowley, Marvell, Dryden, Swift, Pope, Thomson, Young, Johnson, Collins, Gray, Goldsmith, Chatterton, Cowper, Burns, in Representative Poetry, Vol. I; Fielding: Tom Jones (Modern Library); Walpole: The Castle of Otranto, in Three Eighteenth Century Romances (Modern Students' Library); Dryden: All for Love; Congreve: The Way of the World, in Restoration Plays (Everyman); Swift: Battle of the Books (Everyman); Johnson: Selections (ed. Osgood, Holt); and Lives of Cowley and Dryden in Lives of the Poets, Vol. I (World Classics); Burke: On Conciliation with America (Ginn).
- 9, 10. Studies in Poetry. An approach to the main problems of poetic form and of the poetic experience, with some consideration of the art of prose. Texts: Representative Poetry; L. S. Harris: The Nature of English Poetry (Dent); H. Read: English Prose Style (Bell).
- 11, 12. ENGLISH LITERATURE OF THE NINETEENTH CENTURY. Jane Austen: Sense and Sensibility (Everyman); Emily Brontë: Wuthering Heights (Everyman); Thackeray: Vanity Fair (Everyman); George Eliot: The Mill on the Floss (Everyman); Hardy: Tess of the D'Urbervilles (Macmillan); Wordsworth: The Prelude, 1805 (Oxford University Press); Shelley: Prometheus Unbound (Houghton Mifflin); Tennyson: In Memoriam (Houghton Mifflin); Browning: The Ring and The Book, Bks. I, V, VI, VII, X, XI, XII (Modern Students' Library); English Critical Essays of the Nineteenth Century (World's Classics).
- 13. American Literature of the Nineteenth Century. A study of the main authors and movements in American literature

from Irving to Whitman. Texts: Irving: The Sketch Book (Everyman); Emerson: Selections (ed. Carpenter, American Book Co.); Hawthorne: The Scarlet Letter (Everyman); Melville: Moby Dick (Everyman); Poe: Selections (ed. Alterton and Craig, American Book Co.); Whitman: Selections (ed. Stovall, American Book Co.); American Critical Essays of the Nineteenth and Twentieth Century (ed. Foerster, Oxford University Press).

- 14. ENGLISH AND AMERICAN LITERATURE OF THE TWENTIETH CENTURY. Henry James: The Ambassadors (Harper); Conrad: Lord Jim (Modern Library); Lewis: Main Street (Cape); Virginia Woolf: Mrs. Dalloway (Modern Library); Chief Modern Poets of England and America (ed. Sanders and Nelson, Macmillan, new edition); English Critical Essays of the Twentieth Century (World's Classics).
- 15, 16. The Drama. (a) Classical Drama and English Drama to Beaumont and Fletcher. (b) Restoration Drama to the Present. Texts: An Introduction to Drama, Hubbell and Beaty (Macmillan); Minor Elizabethan Drama, 2 vols. (Everyman); Twelve Famous Plays of the Restoration and Eighteenth Century (Modern Library); Seven Contemporary Plays (Houghton Mifflin).

References: The Theory of Drama, Allardyce Nicoll (Harrap); Restoration Comedy, Bonamy Dobree (Oxford); Aspects of Modern Drama, F. W. Chandler (Macmillan); Modern Drama, J. W. Marriott (Nelson); European Theories of the Drama, Barrett H. Clark (Stewart Kidd).

17, 18. NINETEENTH CENTURY PROSE. A study of the main movements in English prose, excluding the novel and technical philosophy, from 1790 to 1900. Texts: Burke: Reflections on the French Revolution (Everyman); Paine: The Rights of Man (Everyman); Carlyle: Sartor Resartus (ed. Macmechan, Ginn), Past and Present (ed. Mims, Modern Students' Library); Newman: Idea of a University, Preface, Discourses V-VIII (Everyman), Apologia pro vita sua (Everyman); Mill: On Liberty, Utilitarianism (Everyman); Ruskin: Selections (ed. Roe, Modern Student's Library); Arnold: Culture and Anarchy (ed. Knickerbocker, Modern Reader's Lib.); Butler: Erewhon, Erewhon Revisited (Everyman); Huxley: Essays (Modern Reader's Library); Morris: News from Nowhere (Heinemann); Pater: The Renaissance (Macmillan).

References: Cazamian: L'Angleterre Moderne (Flammarion); Church: The Oxford Movement, 1833-1845 (Macmillan); Faber: The Oxford Apostles (Faber and Faber); Roe: Social Philosophy of Carlyle and Ruskin; Benn: History of English Rationalism in the Nineteenth Century (Macmillan); Thorndyke: Literature in a Changing Age (Macmillan).

19. ELEMENTARY OLD ENGLISH. Text: Turk's An Anglo-Saxon Reader (Scribners). Phonology; Grammar; Selections.

Reference: English Literature before Chaucer, by P. G. Thomas (Edward Arnold).

20. Middle English. An Anglo-Saxon Reader, ed. Turk (Scribners), Selections XXVII, XXVIII, XXIX; Fourteenth Century Verse and Prose, ed. Sisam and Tolkien (Oxford); Translations of Piers the Plowman, Pearl, Sir Gawain and the Green Knight, in Romance, Vision and Satire, edited by Jessie L. Weston (Houghton Mifflin); Translation of The Owl and the Nightingale, in The Chief

Middle English Poets, edited by Jessie L. Weston (Houghton Mifflin).

References: Three Mediaeval Centuries of Literature in England, 1100-1400, by C. S. Baldwin (Little, Brown); English Literature before Chaucer, by P. G. Thomas (Edward Arnold); English Literature from the Norman Conquest to Chaucer, by W. H. Schofield (Macmillan).

- 21, 22. The History of Criticism. Aristotle's *Poetics*; Longinus' *On the Sublime*; English criticism from the Restoration to the present; Shakespeare criticism from Dryden to Coleridge; special study of the following critics: Dryden, Pope, Addison, Johnson, Goldsmith, Wordsworth, Coleridge, Shelley, Hazlitt, Carlyle, Jeffrey, Arnold, Pater, Croce; selections from the work of minor critics.
- 23. ADVANCED OLD ENGLISH. (a) Beowulf, edited by F. Klaeber (Heath). (b) A knowledge of Old English Literature from the following: Translations from Old English Prose, by Cook and Tinker (Ginn); Old English Poems, by Faust and Thompson (Scott, Foresman); Old English Poetry, translated by Spaeth (Princeton University).

References: English Literature Before Chaucer, Part I, by P. G. Thomas (Edward Arnold); English Literature from the Beginning to the Norman Conquest, by Stopford A. Brooke (Macmillan); An Old English Grammar, by Wright (Oxford); Beowulf, an Introduction, by R. W. Chambers (Cambridge); Beowulf and Epic Traditions, by W. W. Lawrence (Harvard University Press); Translations of Beowulf in The Oldest English Epic, by F. B. Gummere (Macmillan).

24. HISTORICAL ENGLISH GRAMMAR. (a) An elementary study of Gothic and Germanic Philology. Text: Grammar of the Gothic Language, by Joseph Wright (Oxford). (b) A survey of the growth of the English Language, including such topics as: The origin and nature of language; chief language types and families; the place of English in the Indo-European system; history of English inflections, syntax, vocabulary, and phonology; semantics and lexicography. Texts: History of the English Language, by O. F. Emerson (Macmillan); Growth and Structure of the English Language, by Otto Jespersen (Stechert); Modern English, by Geo. P. Krapp (Scribners).

References: A Short History of English, by H. C. Wyld (Dutton); A History of the English Language, by Albert C. Baugh (D. Appleton—Century Co.); Words and Their Ways in English Speech, by Greenough and Kittredge (Macmillan); The Making of English, by Bradley (Macmillan); History of Modern Colloquial English, by H. C. Wyld (Unwin); The Knowledge of English, by Geo. P. Krapp (Holt).

- 25. SHAKESPEARE'S CONTEMPORARIES. A study of the prose, and non-dramatic poetry of the sixteenth century.
- 26. Shakespeare Seminar. A detailed study of some of Shakespeare's plays, a consideration of such problems as Shakespeare's use of sources, the development of his dramatic technique and the Elizabethan stage.
- 27, 28. Dissertation. A dissertation on some problem connected with one of the fourth or fifth year courses in English. The subject of the dissertation must be submitted to the department by December 1st.

DEPARTMENT OF FRENCH

W. F. Osborne, M.A., Officier d'Académie Professor
C. Meredith Jones, M.A., Docteur de
l'Université de Paris Assistant Professor
Céline A. Ballu, M.A. Lecturer
M. E. J. Richard, B.A., Dipl. d'Ecole de Préparation
(Sorbonne). Lecturer

French I—Courses 1, 2; 3, 4. (Prerequisite, Matriculation French.)
French II—Courses 5, 6; 7, 8. (Prerequisite, French I.)

French III—Courses 9, 10: 11, 12, (Prerequisite, French II.)

French III H—Courses 9, 10; 11, 12; 13, 14. (Prerequisite, French II, plus Selection).

French IV—Courses 15, 16; 17, 18. (Prerequisite, French III.)

French IV G—Courses 15, 16; 17, 18; 19, 20; 21, 22. (Prerequisite, French III.)

French IV H—Courses 15, 16; 17, 18; 19, 20; 21, 22. (Prerequisite French III.)

French V—Courses 23, 24; 25, 26; 27, 28; 29, 30. (Prerequisite, French IV H.)

N.B.—For key to system of numbering courses, see page 5.

1, 2. Grammar and Composition. Text: A Practical French Grammar. Olmsted and Sirich (Holt).

First Term: Lessons X-XXIX. Drill in Auxiliaries, the Regular Verb, and half of the Irregular Verb.

Second Term: Lessons XXX-L. Irregular Verb completed.

As much time as possible will be given in each term to the translation into French of passages of continuous prose.

3, 4. AUTHORS. First Term: Alphonse Daudet, Tartarin de Tarascon, ed. by Hawkins, pub. by Copp, Clark. Second Term: French Short Stories, ed. by Hills and Holbrook, pub. by Copp, Clark. In this volume the stories prescribed are those by Bazin, Daudet, Maupassant, Coppée, Mérimée (omitting Tamango), Balzac, Zola.

A substantial proportion of the marks assigned to translation in these papers will be given for sight work.

5, 6. Practice and Composition. Text: Cours Pratique Avancé, ed. by Borglum and Borglum, pub. by Harper. First Term: Lessons I-VII, inclusive. Second Term: Lessons VIII-XVI, inclusive.

The student must have in his possession for reference The New Fraser and Squair Complete French Grammar, Part II (Copp, Clark).

7, 8. Authors. First Term: René Bazin, Le Blé qui lève, ed. by Neff, pub. by Holt. Second Term: Molière, Le Misanthrope, ed. by Eggert, pub. by Copp, Clark; and Henri de Bornier, La Fille de Roland, ed. by Nelson, and pub. by Copp, Clark.

Sight work will be substantially represented in these papers.

9, 10. Explication de Textes et Composition. Methods of analysis, oral and written, and facility in composition will be developed by the use of:

Passages selected from the works prescribed in Courses 11

and 12.

Visages de la France, ed. by Lebert, Schwartz, and Ernst, pub. by American Book Co. First Term: Material used will be drawn from the first 176 pages. Second Term: Material used will be drawn from the balance of this text.

Douze Contes de Guy de Maupassant, ed. by Ritchie, pub. by Thos. Nelson. First Term: Any three of the first six Contes. Second Term: Any four of the last six.

- 11, 12. SEVENTEENTH AND EIGHTEENTH CENTURIES. First Term—Corneille, Horace, in Classiques Larousse, pub. by La Librairie Larousse, Paris; Racine, Iphigénie, in Classiques Larousse; Molière, Le Bourgeois Gentilhomme, ed. by Warren, pub. by Copp, Clark; selected Letters (Nos. 18, 19, 21, 37, 40, 49) of Madame de Sévigné, in Classiques Larousse; La Fontaine, the second twenty-five numbers in "Fifty Fables," ed. by McKenzie, pub. by American Book Co. Second Term: Voltaire, Zadig, ed. by Babbit, pub. by Heath; Montesquieu, Lettres Persanes, pp. 1-67, ed. by Pellissier, pub. by Macmillan Co. of Canada; Marivaux, Le Jeu de l'Amour et du Hasard, ed. by Fortier, pub. by Heath; Diderot, Selections from, ed. by Giese, pub. by Heath; Extraits de J. J. Rousseau, ed. by Berthon, pub. by Macmillan Co.: pp. 32-41, 42-54, 89-96, 103-107. The student of these courses is expected to have in his or her possession and to use for reference Des Granges Histoire de la littérature française, pub. by Hatier. This will be presumed in the examinations.
- 13, 14. Seminar Course in Seventeenth Century Classicism and Eighteenth Century Ideas. This is designed as a Reading Course, accompanied by Reports—for a carefully selected group of students—in which the performance of the student will be estimated by a final essay of a substantial character.
- 15, 16. EXPLICATION DE TEXTES ET COMPOSITION. First Term: René Boylesve, La Becquée, ed. by Schaffer, pub. by A. Knopf. Second Term: Alain-Fournier, Le Grand Meaulnes, ed. by H. Harvitt, pub. by Scribners.

Methods of analysis developed in the Third Year will be used in a French treatment of these texts with a view to increasing

practical command of French, both oral and written.

17, 18. NINETEENTH CENTURY LITERATURE. First Term: Chateaubriand's Atala; the Poetry of Lamartine, Victor Hugo, Alfred de Vigney, Alfred de Musset, Théophile Gautier, and Leconte de Lisle; and Flaubert's "Un Coeur Simple" in "French Literature of the Nineteenth Century," ed. by Bradley and Michell, pub. by Crofts and Co., New York.

Second Term: Dumas père, Henri III et sa Cour; Victor Hugo, Hernani; Alfred de Vigny, Chatterton; Alfred de Musset, On ne badine pas avec l'Amour; Dumas fils, La Dame aux Camélias; Emile Augier, Le Gendre de M. Poirier; Brieux, la Robe Rouge; Rostand, Cyrano de Bergerac in "Chief French Plays of the Nineteenth Century," ed. by Grant, pub. by Harpers.

19, 20. CONTEMPORARY FRENCH LITERATURE. First Term: Prescribed text: French Literature of the Nineteenth Century, ed. by Bradley and Michell, pub. by F. S. Crofts and Co.

Second Term—Prescribed texts: Modern French Prose, 1918-28, ed. by C. I. Wilson (Thos. Nelson) and Contemporary French Lyrics of the 20th Century, ed. by Delpit, pub. by Ginn and Co.

In addition to these texts there will be assigned in each term to each student one representative modern novel on which a critical essay will be required.

This course involves the consulting by the student of collateral reading, direction with regard to which will be given by the instructor.

- 21, 22. French Prose Composition, English into French. Text: A Manual of French Composition, edited by Ritchie and Moore, and published by the Cambridge University Press.
- 23, 24. The Literature of the French Renaissance. Calvin, Pages Choisies, edited by Daniel Jordan (Heath). Selections from—Marot; Joachim du Bellay; Brantôme; in Darmesteter et Hatzfeldt, Le Seizième Siècle en France (Delagrave). Du Bellay, La Défense et illustration de la Langue Française (Classiques Garnier). Ronsard, Poésies choisies, ed. by Paul Maury, 2 vols. (Classiques Larousse). Brantôme, Vies des Dames Illustres. Discours sur Anne de Bretagne only, (Classiques Garnier). Satyre Ménippée (Classiques Garnier). Rabelais, edition by Huguet (Pages Choisies des Grands Ecrivains, Armand Colin). Montaigne, Essais (Extraits), ed. by Raphaël Pangaud, 2 vols. (Classiques Larousse).
- 25, 26. NINETEENTH CENTURY DRAMA. Text: Nineteenth Century French Plays, ed. by Borgerhoff, pub. by The Century Co.
- 27, 28. Advanced French Prose Composition, English into French. Text: French Composition, Book III (Advanced Stage), by Kastner and Marks, pub. by Dents.
- 29, 30. EVOLUTION HISTORIQUE DE LA FRANCE DES ORIGINES À NOS JOURS. Texts: Alfred Rambaud, L'Histoire de la Civilisation Française, 2 vols., Librairie Armand Colin, Paris. This course is conducted in French, and will be open to M.A. and other approved students.

DEPARTMENT OF GEOLOGY AND MINERALOGY

Justin S. DeLury, B.A., Ph.D., F.R.S.C., F.G.S.A. Professor George M. Brownell, M.Sc., Ph.D. Assistant Professor Edward I. Leith, B.Sc., M.Sc. Lecturer

GEOLOGY II—Courses 1, 2; 1a, 2a.

Geology III—Courses 7, 8; 11, 11a; 12, 12a. (Prerequisite, Geology II and Chemistry I.)

GEOLOGY IV—Courses 19, 19a; 20, 20a. (Prerequisite, Geology III.)

Geology IV H—Courses 15, 15a; 16, 16a; 19, 19a; 20, 20a. (Prerequisite, Geology III, Physics I.)

Geology V—Courses 31, 31a; 32, 32a and either 23, 23a; 24, 24a or 27, 27a; 28, 28a. (Prerequisite, Geology IV.)

THIRD YEAR CIVIL ENGINEERING—Courses 5, 5a, 6, 6a.

Students intending to enter courses in Geology in the Senior Honors Division in Science are advised to consult pages 39-40 for guidance as to choice of subjects in the Junior Division and in the First Year of the Senior Division.

- 1, 2. General Geology. The materials of the earth. Geological agents and structures. Ore deposits. Fossils and their meaning. Origin and age of the earth. Historical geology. Evolution of plant and animal life. Elements of Geology, Miller. Two hours a week.
- 1a, 2a. Practical Demonstrations. On minerals, rocks and fossils. Study of topographical and geological charts and maps. One hour a week.
- 5, 6. Engineering Geology. Similar in scope to Course 1, 2, but with particular application to engineering problems. Ries and Watson; Engineering Geology. Two hours a week.
- 5a, 6a. Engineering Geology, Practical. Identification of common minerals and rocks from hand specimens. Brief study of fossils. Study of physiographic features from topographical maps and the interpretation of geological maps. Two hours a week.
- 7, 8. Practical Geology. Systematic examination of minerals by blowpipe and dry way tests. Geological maps and structure sections. Three hours a week.
- 11. CRYSTALLOGRAPHY. Laws of crystallography. Stereographic projection. Systems and classes. Dana: Text book of Mineralogy. Two hours a week.
- 11a. Practical Crystallography. Study of crystal forms. Two hours a week.
- 12. MINERALOGY. Classification and systematic study of minerals. Genetic relationship. Dana: Text book of Mineralogy. Two hours a week.
- 12a. Practical Mineralogy. Study and identification of mineral specimens in the laboratory. Two hours a week.
- 15, 16. Petrography and Petrogenesis. Optical properties of rock-forming minerals. Physicochemical laws governing the formation of igneous, metamorphic and sedimentary rocks. Mechanics of igneous intrusion. Grout: Petrography and Petrology; Rogers and Kerr: Thin Section Mineralogy. Two hours a week.
- 15a, 16a. Practical Petrography. Identification of minerals in powder and thin section under the polarizing microscope. Study of rocks in thin section. Quantitative estimates of rock compositions. Five hours a week.
- 19. PALAEONTOLOGY. The nature of fossils. Study of representative fossil invertebrates with emphasis on biological characters.

- Fossil vertebrates and plants in brief outline. Twenhofel and Schrock: Invertebrate Palaeontology. Three hours a week.
- 19a. Practical Palaeontology. Laboratory study of fossils. Three hours a week.
- 20. Petrology. Occurrence and classification of rocks. The origin and occurrence of non-metallic economic deposits. Tyrrell: Principles of Petrology. Three hours a week.
- 20a. Practical Petrology. Examination and determination of rock-forming minerals, rocks and economic minerals in hand specimens. Two hours a week.
- 23, 24. Economic Geology. A study of the genesis and mineralogy of ore deposits. The structural geology and petrography of the great mining districts of the world. Lindgren: Mineral Deposits. Two hours a week.
- 23a, 24a. Practical Economic Geology. Study of ore suites and rock formations of some important ore deposits. Identification of opaque ore minerals under the microscope with a study of the paragenesis and structures of the typical ores. Short: Microscopic Determination of the Ore Minerals. Six hours a week.
- 27, 28. Advanced Invertebrate Palaeontology. Systematic study of fossil invertebrates; more comprehensive than in Course 19, involving greater taxonomic detail and phylogenetic consideration. Two hours a week.
- 27a, 28a. Practical Advanced Palaeontology. Study of representative collections of North American fossils and use of the palaeontological literature of Canada and the United States in determination of species. Six hours a week.
- 31, 32. Stratigraphy. (a) Principles: Including a study of processes, environments and products of sedimentation, structural characters and relations of sedimentary rocks, evidence obtained from fossils, classification and correlation of geological formations and palaeogeography. (b) Stratigraphy of North America: The physical and faunal history of the different geological periods. Two hours a week.
- 31a, 32a. Practical Stratigraphy. Problems on stratigraphical principles involving independent use of geological literature. Chronological interpretation of geological maps. Study of faunas and floras of the geological periods dealt with in the lecture course 31, 32. Six hours a week.
- 35, 36. Advanced Investigations and Research. Students in the M.A. and M.Sc. courses, and the more advanced students in the fifth year of the Honors B.Sc. course, will carry out, under direction, independent investigation on some field or laboratory problem. The laboratories are open all day for this purpose.
- 37, 38. Geological Excursions. During October, the earlier part of November, and the latter part of March, excursions will be conducted on Saturdays to places of geological interest in the neighborhood of Winnipeg. These excursions form an integral part of the class work.

43, 44. Graduate Courses. Special courses on advanced topics will be arranged for Graduate Students from year to year as the occasion demands.

Students who intend to read Geology as an Honors subject should, if possible, spend their summers as student assistants under the Geological Survey of Canada.

ADDITIONAL TEXT BOOKS RECOMMENDED:

Geology, Chamberlin and Salisbury; Hand Book of Minerals, Butler; Determinative Mineralogy, Brush and Penfield; Mineral Deposits, Lindgren; Economic Geology, Ries; Metamorphic Geology, Leith and Mead; Manual of Petrographic Methods, Johannsen; Determination of Rock Forming Minerals, Johannsen; Quantitative Classification of Igneous Rocks, Cross, Iddings, Pirsson and Washington; Sedimentary Petrography, Milner; Principles of Stratigraphy, Grabau; Treatise on Sendimentation, Twenhofel; Interpretation of Topographic and Geologic Maps, Dake and Brown; Economics of Mining, Hoover; Text-book of Geology, Part I, Longwell, Knopf and Flint, and Part II, Schuchert and Dunbar; Laboratory Manual, Secrist; Optical Mineralogy, 3 vols., Winchell.

DEPARTMENT OF GERMAN

J. H. Heinzelmann, B.A., Ph.D. Professor
Anton Bürzle, Ph.D. Assistant Professor

GERMAN I A-Courses 1, 2.

GERMAN I—Courses 3, 4. (Prerequisite, Matriculation German or German I A.)

GERMAN II A—Courses 5, 6. (Prerequisite, Matriculation German or German I A.)

GERMAN II—Courses 7, 8. (Prerequisite, German I, or I A for students who have made an average of 80% in their I A examinations and who have done a part of German I privately without credit. Consult your instructor.)

GERMAN III—Courses 9, 10. (Prerequisite, German II.)

GERMAN III H—Courses 11, 12.

GERMAN IV—Courses 9, 10.

GERMAN IV H—Courses 9, 10; 13, 14.

1, 2. ELEMENTARY GERMAN. This course is offered to students who enter the University without German.

First Term—Zeydel, Beginners' German (Heath & Co., Copp, Clark, Canadian agents), to p. 147; Gates, Im Herzen Europas (Ginn & Co.), to p. 17.

Second Term—Beginners' German, completed; Im Herzen Europas, completed, omitting selections 8, 17, 18, 20, 23, 25, 28, 40. (For numbers, see table of contents.)

3, 4. GERMAN AUTHORS AND PRACTICE.

First Term—Betz & Holzwarth, Second German Book (American Book Co.), pp. 1-96; 193-310; and 375-384 (inclusive).

It is expected that as much oral and written work as possible be done throughout the year, particularly with the reading selections in Part I of the book.

Second Term—A Second German Book, completed; Hohrath, Hannelohre erlebt die Grossstadt (Crofts).

5, 6. German Prose Reading. This course is designed primarily for Science students and those who intend to go forward to the course in Medicine. The aim is to develop method in the reading of scientific German.

First Term—Mankiewicz & Brandt, Deutscher Alltag (Johnson Publishing Co.), pp. 1-105.

Second Term—Deutscher Alltag, completed; Dippold, Scientific German Reader (Ginn), Selections. Sight Reading.

7, 8. ADVANCED AUTHORS AND PRACTICE.

First Term—Practice: Pope, Simple Writing and Speaking German (Holt), pp. 1-41 and 86-89. Original Essays.

Authors: Steguweit, Frohes Leben (Farrar & Rinehardt, 508 W. 26th St., New York); Appelt and Funke, Modern German Prose (Heath), to p. 59, omitting 34-42; Hatfield, Shorter German Poems (Heath), Parts I and II.

Second Term—*Practice*: Simple Writing and Speaking, pp. 42-89 and 90-92. Original Essays.

Authors: Modern German Prose, completed; Schiller, Wilhelm Tell (American Book Co.); Shorter German Poems, completed.

9. HISTORY OF GERMAN LITERATURE AND LESSING.

A survey of the literary history of Germany from the Reformation to the death of Lessing. A detailed study of Lessing's literary development, together with the reading of Minna von Barnhelm (Holt), Emilia Galotti (Heath) and Nathan der Weise (Ginn). German themes.

10. GOETHE.

A study of Goethe and his time with the reading of the following: Werther (Oxford Press); Faust, Part I (Heath); Iphigenie (Holt), and Hermann und Dorothea (Ginn). Essays.

- 11. An extension of Course 9, with additional reading and essays.
 - 12. SCHILLER.
- 13. HISTORY OF GERMAN LITERATURE from the earliest times to the Reformation, with selected Readings.
 - 14. NINETEENTH CENTURY GERMAN DRAMA.

Lectures on the development of German dramatic literature in the nineteenth century will accompany the reading of the more important masterpieces. German themes.

15. GERMAN ROMANTICISM,

Lectures on the history of German literature in the period from 1795 to 1830. The meaning of "Romanticism" in Art and Literature. The following works will be read: Fouqué, Undine; Chamisso, Peter Schlemihl; Hoffmann, Meister Martin der Küfner; Eichendorff, Aus dem Leben eines Taugenichts; Heine, Harzreise; also selections from Vos and Barba, German Lyrics and Ballads. Essays in German. (Not offered in 1937-38.)

16. MODERN GERMAN FICTION.

A study of the development of German fiction from Goethe to the present. Lectures with parallel readings and essays. The reading material will all be available in the library. (Not offered in 1937-38.)

17. CONTEMPORARY GERMAN LITERATURE.

Lectures on German literary conditions and tendencies since 1900 will be accompanied by the reading of the more typical works of the period. Essays. (Not offered in 1937-1938.)

18. THE HISTORY OF GERMAN CULTURE.

A study of various phases of German civilization, its history, art, music, etc., as a background of German literature. Assigned readings and essays. (Not offered in 1937-38.)

DEPARTMENT OF HISTORY

| H. N. Fieldhouse, M.A. | Professor |
|-------------------------------|---------------------|
| J. E. Howe, M.A. | Assistant Professor |
| R. O. MacFarlane, M.A., Ph.D. | Assistant Professor |

HISTORY I-Courses 1, 2, 1A, 2A.

HISTORY II-Courses 3, 4.

HISTORY III—Courses 5, 6. (Prerequisite, History II.)

HISTORY III H—Courses 5, 6, 5A, 6A (Prerequisite, History II.)

HISTORY IV—Courses 7, 8. (Prerequisite, History II.)

HISTORY IV H—Courses 7, 8; and either 9, 10; or 11 (a or b) 12.

HISTORY V—Courses 17, 18; and either 13, 14; or 15, 16.

For Prerequisites for History IV H and V, consult the Head of Department.

N.B.—For key to system of numbering courses, see page 5.

Students are advised that emphasis will be laid on the preparation of essays and other term work as prescribed by the instructor. The text book assigned to each course is not intended for more than an introductory guide. A knowledge of the necessary historical geography will be expected in all courses, so that students are advised to supply themselves with an historical atlas, such as that by W. R. Shepherd, *Historical Atlas* (Henry Holt, New York).

- 1, 2. HISTORY OF EUROPE FROM THE ELEVENTH TO THE EIGHTEENTH CENTURY. The purpose of this course is to enable the student to appreciate the social, economic, and religious origins of European civilization, in order to prepare him for a more detailed study of the problems of modern European History. Text Book: A Modern History of Europe, 1069-1918. (Edited by T. Hampden Jackson.) (Harper & Bros.)
- 1A, 2A. How Britain and Canada Are Governed. A short descriptive course in the actual machinery and practice of government as it exists in Great Britain and Canada at the present time.
- 3. The French Revolution. Text book: L. Gottschalk, The Era of the French Revolution. (Houghton Mifflin.)
- 4. HISTORY OF EUROPE SINCE 1918. The purpose of this course is to throw light upon the political problems of contemporary Europe, by a study of the historical origins of the policies which have been pursued by the various European nations between 1918 and 1935.

Topics selected from: The Peace Treaties, 1919-23; the League of Nations; the Reparations Settlements; Problems of International Security and Disarmament; the policies and relations of the Powers during (a) the post-war period down to the Locarno Treaties (1920-25), (b) the period of appeasement from Locarno to Herr Hitler's advent to power in Germany (1925-33), and (c) the post-Hitlerian years (1933-35).

Texts: P. Slosson: Europe Since 1870 (Houghton Mifflin); J. Horrabin: Atlas of Current Affairs (Gollancz).

- 5. AMERICAN HISTORY TO 1865. The development of the U.S.A. from their origin to the Civil War. Chief topics: The nature of the colonizing efforts of the chief European Powers in North America, with special reference to those of England and France; English colonial development and policy; the new Imperialism and the American Revolution; the formation of the American Constitution; the rise of the party system; the frontier and its effects; foreign policy; Slavery and the Civil War. Text books: Harlow, Growth of the United States; or C. A. and M. R. Beard, The Rise of American Civilization.
 - 5a. Additional and Supplementary to Course 5.

Topics: Provincial America; Anglo-American Relations; "Manifest Destiny"; Constitutional Developments; the Westward Movement; Economic Progress.

6. Canadian History Since 1763. The following topics will be emphasized: The establishment of the British règime, the Quebec Act, the Loyalists, relations with the U.S.A., representative and responsible government, immigration and settlement, development of communications, Confederation, growth of political parties, settlement of the West, social and economic development of the Dominion, trade and industry, Imperial and external relations. Students are advised to consult Burpee, An Historical Atlas of Canada; Trotter, Canadian History, A Syllabus and Guide to Reading. All students will require a copy of Kennedy, Constitution of Canada.

6a. Additional and Supplementary to Course 6.

Topics: The British North America Act; Dominion-Provincial relations; the development of transportation; the pioneer economy; utilization of natural resources; Canada in the War; Agrarianism.

- 7. British History, Mediaeval. This course will be primarily a study of constitutional development prior to 1485, but will assume a working knowledge of the political background. It will include the following topics: Celtic and Roman influences, the institutions of the Anglo-Saxons, the Norman conquest, feudalism, the administrative and judicial reforms of the Norman and Angevin kings, Magna Carta, the baronial opposition, the evolution of parliament, the struggle between the Council and the Household, the Lancastrian experiment and its failure. Students will be expected to provide themselves with Lunt History of England (Harper & Bros.); Adams, Constitutional History of England (Cape); and the selection of documents prepared for use in this course and obtainable from the University Book Department.
- 8. British History, Modern. While tracing the modern growth of the English Constitution, this course will rest upon the assumption that constitutional changes are rarely made for their own sake. It will emphasize the effect upon constitutional development of:
 - (a) the impact of powerful personalities;
 - (b) religious, economic, and political forces.
- e.g. Topics: The rise of Protestantism and its relation to economic capitalism; the development of English civilization and government as the work of a closely-knit aristocracy; the characteristic English relationship between a landed and an urban interest; the political consequences of the rise of an evangelical middle class, etc., etc.
- 9. HISTORY OF EUROPE SINCE 1918. Topics selected from: The Treaties of Versailles, St. Germain, Neuilly, Trianon and Sevres; the League of Nations; the Reparation Settlements; problems of International Security and Disarmament; French domestic politics, Italian Fascism; the Spanish Dictatorship and Republic; the rise and fall of the German Republic; the Austro-Hungarian Succession States; Soviet Russia. Text book: G. Gathorne Hardy, Short History of International Affairs, 1920-34. (Oxford University Press.)
- 10. The United States Since the Civil War. A course of lectures with prescribed reading, designed to examine the origins of current American problems. Particular attention will be given to the following topics: Reconstruction of the Southern States, civil service reform, tariff history, foreign relations, the passing of the frontier, the building of the railroads, industrialization, immigration, agrarian discontent, United States as a world power, Theodore Roosevelt and reform, Wilson and the war, "the golden twenties," social and intellectual movements, the fight against depression.
- 11a. British Imperial History to 1783. This course will be a study of the rise and fall of the First British Empire. Particular attention will be paid to the following topics: the commercial background of overseas expansion, the founding of an overseas empire, the old Colonial System, the development of the overseas empire,

the American Revolution. Williamson, *A Short History of British Expansion*, will serve as a narrative outline for the course.

- 11b. The History of Europe from 1815 to 1870. The period will be treated topically and the topics emphasized will be the Concert of Europe, the Eastern Question, Nationalism, Liberalism, Industrialism, Socialism and Ultramontanism.
- 12. British Imperial History Since 1783. This course will be a survey of the factors which have helped to shape the present Empire, not a study of the local history of the various sections of that Empire. General topics: The founding of the Second Empire, the decline and fall of the old Colonial System, early and mid-Victorian Imperialism, the development of the white Empire and of India, the New Imperialism, the Great War and the reconstruction of the Empire. Williamson, A Short History of British Expansion, Vol. 2, will serve as a narrative outline for the course.
- 17, 18. Topics in Canadian History. This course will attempt to introduce students to certain primary materials of Canadian history and to give them a first acquaintance with methods of research.
- 13, 14. Europe, 1870-1914. This course will enable students to use some of the primary materials of European history, as an introduction to methods of research in this field. Students are advised to buy S. B. Fay, *The Origins of the World War.* (Macmillan.)
- 15, 16. The Concert of Europe. A detailed study of the settlement of Europe after the Napoleonic Wars, and of the experiment in the maintenance of international public order.

Students who wish to undertake post-graduate work in History should consult the Head of Department.

DEPARTMENT OF MATHEMATICS AND ASTRONOMY

| Norman R. Wilson, M.A., Ph.D., F.R.S.C. | Professor |
|---|--------------|
| Lloyd A. H. Warren, M.A., Ph.D., F.R.A.S., A.A.L.A., A.A.S., F.C.A.S. | Professor |
| William Tier, M.A. | Professor |
| T. H. Milne, M.A. Assistan | nt Professor |
| Cyril H. Goulden, M.S.A., Ph.D. Honora | ry Lecturer |
| J. William Lawson, M.A. | Lecturer- |
| Hart D. Clark, B.A. | Fellow |

MATHEMATICS I—Courses 1, 3 (one paper); 2, 4 (one paper). (Prerequisite, Matriculation Mathematics.)

MATHEMATICS I A—Courses 5, 6.

Mathematics II—Courses 13, 14; 15, 16. (Prerequisite, Mathematics I.)

MATHEMATICS II A—Courses 5, 6.

- Mathematics III—Courses 17, 18; 29, 30. (Prerequisite for 29, 30, Mathematics II.)
- ACTUARIAL SCIENCE III—Courses 75, 76; taken with Applied Mathematics III, English III A or Psychology III A by students in Arts and with Applied Mathematics III, General Science Mathematics III, Bacteriology III or Biochemistry III by students in Science.
- APPLIED MATHEMATICS III—To be announced; taken with Actuarial Science III, English III A or Psychology III A by students in Arts and with Actuarial Science III or a two-unit subject by students in Science. (Prerequisite, Mathematics II.)
- MATHEMATICS III H.—To be announced; taken with the corresponding special honors course of some other Department in Arts. (Mathematics III H and Applied Mathematics III will be identical in content.)
- Mathematics IV—A selection of four courses from the following: 25, 37, 39, 40, 43, 44, 46, and, for students proceeding to the B.Sc. degree, 55, and 56, or 57, 58.
- MATHEMATICS IV H AND V—The four courses given under Mathematics IV and four courses to be selected by the Department.

ACTUARIAL SCIENCE IV—Courses 73, 74, 77, 78.

APPLIED MATHEMATICS IV—A selection to be made by the Department from such of courses 28, 39, 40, 54, 55, 56, 57, 58, as are available.

ACTUARIAL SCIENCE V-Courses 79, 80.

PHARMACY I—(Degree Course)—Courses 1, 2, 3, 4.

ARCHITECTURE I—Courses 1, 2, 3, 4, 5, 6.

ARCHITECTURE II—Courses 19, 52.

Engineering I—Courses 9, 10, 19, 20, 52, 93.

Engineering II—Courses 21, 22, 89.

CIVIL ENGINEERING III—Courses 54, 96.

ELECTRICAL ENGINEERING III—Courses 54, 96.

ELECTRICAL ENGINEERING III—Course 23.

ASTRONOMY II—Courses 91, 92.

Astronomy III—Courses 89, 93, 54, 96, or their equivalent from courses available.

Students intending to specialize in Pure Mathematics are advised to combine it with Physics in all years; and, so far as possible, with Astronomy and Chemistry. Students intending to specialize in Financial Mathematics are advised to combine it with Economics. Students intending to enter courses in Mathematics in the Senior Honors Division in Science are advised to consult page 39 for guidance as to choice of subjects in the Junior Division and in the First Year of the Senior Division. Students are advised against taking Mathematics II unless they take concurrently or have taken Trigonometry (Mathematics IA or IIA).

N.B.—For key to system of numbering courses, see page 5.

PURE MATHEMATICS

*1, 2. Algebra. Text: An Intermediate Algebra by Wilson and Warren (Oxford University Press). Two hours per week.

First Term—Chapters I (omitting Sec. D), II-IV, XI (Secs. 90-91).

Second Term-Chapter III, VI-IX.

3, 4. ANALYTIC GEOMETRY. Text: Analytic Geometry by Crawley and Evans (University of Pennsylvania, Philadelphia). Two hours per week.

First Term—Chapter I, II (secs. 14, 15, 20), III.

Second Term—Chapters IV, V, and the elementary properties of radical axes.

5, 6. TRIGONOMETRY. Text: Hall and Knight (Canadian Edition), Castle, Four Figure Tables (Macmillan). Two hours per week. (In II A, greater skill in manipulation will be required.)

First Term—Chapters I-VIII, XI.

Second Term—Chapters IX, X, XIII-XV (pp. 204-218), XVII, XVIII.

7, 8. General Mathematics for Students in Agriculture Texts. An Intermediate Algebra. Wilson & Warren; Practical Trigonometry, Playne & Fawdry. References: Mathematics for Agriculture & General Science, Kenyon & Lovitt (Macmillan).

First Term—Arithmetic—Contracted methods and methods of checking; Algebra—Review, ratio, proportion, variation, arithmetic and geometric progressions (parts of chaps. I-IV).

TRIGONOMETRY—Chaps. I-III, parts of chaps IV and V necessary for chap. VIII.

Second Term—Algebra—Logarithms, interest and annuities, binomial, elements of probability (parts of chaps. VI-IX, XIV).

TRIGONOMETRY—Part of chap. VI, sec. 53 of chap. VII, chap. VIII to end of sec. 61, chap. IX to sec. 72.

- 9, 10. ALGEBRA. Text: Wilson and Warren, Intermediate Algebra. Two hours per week, for students in Engineering. Theory of quadratics, complex numbers, limits, convergence of series, exponential and logarithmic series, logarithm, hyperbolic functions, solution of numerical equations including transcendental equations, theory of equations, partial fractions, computation with approximate numbers.
- 13, 14. Analytic Geometry. Text: Crawley and Evans. Two hours per week for students in Arts and Science.

First Term—Chapter III, secs. 29, 32; Chapter V, secs. 60, 61, 57, Chapter VI, VII.

Second Term—Chapters VIII, IX (omitting secs. 96, 99, 100, but including hypocyloid of four cusps), X, XII to p. 224 (omitting secs. 116, 117).

^{*}Students preparing for Engineering or the special courses in Mathematics are advised to procure the complete edition of this text book.

- 15, 16. CALCULUS, Text, Slobin & Solt, A First Course in Calculus (Rinehart & Farrar). An introductory course in the Calculus. Two hours per week, for *students in Arts and Science*.
- 17, 18. Algebra. Text: Wilson and Warren, Intermediate Algebra. Two hours per week, for students in Arts and Science.
- 19. ANALYTIC GEOMETRY. Text: Crawley and Evans. Three hours per week, for students in Engineering. From page 107, selected sections.
- 20, 21, 22. CALCULUS. An elementary course with practical applications. Differentiation, measurement of rates, motion in curved paths, maxima and minima, partial derivatives, tangents and normals, curvature, evolutes, expansions, formation of differential equations, integration, areas and lengths of curves, volumes and surfaces, multiple integrals, centres of gravity, moments of inertia. First Year: Two hours per week. Second Year: Three hours per week; for students in Engineering.
- 23. DIFFERENTIAL EQUATIONS. Text: Hodgson, Applied Mathematics for Engineers, Vol. III, Chapters I, IV, VI, VIII. Two hours per week, for *Engineering students*. A selected course, specially adapted to the needs of engineers.
- 25. Determinants and Theory of Equations. A continuation of courses 9, 10. Texts: Wilson and Warren, Intermediate Algebra, Chapter XI; Dickson, First Course in the Theory of Equations, Chapters I to VIII; for reference, Burnside and Panton, Theory of Equations. Two hours per week; for students in Arts and Science.
- 27. ALGEBRA. Texts: Wilson and Warren, Intermediate Algebra; Hall and Knight, Higher Algebra. Scales of notation, symmetric functions, continued fractions, indeterminate equations, convergence of series and products, summation of series, elementary theory of numbers. Two hours per week, for Honors students in Arts and Science.
- 28. TRIGONOMETRY. Texts: Todhunter and Hogg, Plane Trigonometry; Todhunter and Leathem, Spherical Trigonometry. Plane Trigonometry—Inverse ratios and general solution of equations, evaluation of n, exponentials, multiple angle formulae, factoring, summation of series, factor form of sine and cosine. Spherical Trigonometry—Formulae connecting sides and angles, Napier's rules, solution of triangles, inscribed circles, etc., areas. One hour per week; for students in Science and Honors students in Arts. (To be combined with 54.)
- 29, 30. DIFFERENTIAL AND INTEGRAL CALCULUS. A continuation of courses 15, 16. Two hours per week; for students in Arts and Science.
- 31, 32. General Science Mathematics. Text: Slobin & Solt, A First Course in Calculus. A brief course for students in Science who have not been able to take Mathematics II, comprising selections from Courses 15, 16 (Calculus) with the necessary parts of Trigonometry and Analytic Geometry.
- 37. Advanced Calculus. A continuation of courses 29, 30 Two hours per week; for students in Arts and Science.

- 38. Advanced Calculus. A continuation of course 37. Two hours per week; for Honors students in Arts and Science.
- 39. DIFFERENTIAL EQUATIONS. Text to be announced. Two hours per week; for Honors students in Arts and Science.
- 40. DIFFERENTIAL EQUATIONS. Text to be announced. Two hours per week; for Honors students in Arts and Science.
- 43, 44. SOLID GEOMETRY. Texts: Hall and Stevens, Geometry, Part VI, selected sections; Wilson & Warren, Algebra, chap. XXII; Snyder and Sisam, Analytic Geometry of Space. Two hours per week; for students in Arts and Science.
- 46. Projective Geometry. Text: Smart. Two hours per week; for students in Arts and Science.
- 49, 50. Functions of a Complex Variable. An elementary course. Two hours per week; for Honors students in Arts and Science.

APPLIED MATHEMATICS

- 52. Solid Geometry and Mensuration. Mensuration of plane figures, including parallelogram, triangle, circle, ellipse, sectors and segments, areas of irregular figures by trapezoidal, midordinate, Simpson's and Dufton's rules. Basic Theorems on planes and lines, projection, trihedral angles. Mensuration of parallelopiped, prism, pyramid, and their frusta, cylinders, cones and their frusta, spheres and their sectors, segments and zones, ungulae of cylinders and cones, prismoidal formulae and irregular volumes, applications to excavations and fills. Two hours per week; for Engineering students.
- 54. The Theory of Errors and Method of Least Squares. (To be combined with 28.) The general principles of probability, the law of error, direct measurements of equal and different weights, mean square and probable errors, indirect measurements, conditioned observation; applications to empirical constant and formulae. One hour per week; for students in Science and Honors Students in Arts.
- 55, 56. Analytic and Vector Mechanics. Vectors; the application of these and analytic methods to mechanics. Two hours per week; for students in Science and Honors Students in Arts.
- 57, 58. Analytic and Vector Mechanics. A continuation of courses 57, 58. Two hours per week; for students in Science and Honors students in Arts.
- 61, 62. CELESTIAL MECHANICS. Central orbits, derivation of Newton's law; determination of the orbit from the law of force; potential and attraction of bodies; the problem of two bodies; the problem of n bodies; the problem of three bodies; Lagrangian straight line and equilateral triangular solutions of the three body problem, surfaces of zero relative velocity, etc.; geometrical and analytical consideration of perturbations. Moulton, Introduction to Celestial Mechanics (Macmillan Co., New York.) Two hours per week; for students in Science.

ACTUARIAL SCIENCE

- 71, 72. Business Mathematics. Arithmetical progession, geometrical progression; theory and use of logarithms; interest and discount; equation of payments; annuities; sinking funds; amortization of debts; amortization schedules; capitalized cost; valuation of bonds; depreciation; exchange. Two hours per week; for students in Accountancy.
- 73, 74. The Mathematical Theory of Investment. Interest and discount; equation of payments; annuities certain; amortization of debts; amortization schedules; valuation of bonds; depreciation; building and loan associations; elementary theory of probability; life annuities; net premiums for simple forms of insurance policies; reserves; valuation. Mathematics of Finance, Rietz, Crathorne and Rietz (Henry Holt and Co.). Mathematical Tables, Rietz, Crathrone and Rietz (Holt). References: Mathematics of Finance, L. L. Smail (McGraw-Hill Book Co.); Institute of Actuaries Text Book, Part I. Two hours per week; for students in Arts and Science.
- 75, 76. Statistics. General statistical methods; frequency distributions; various types of averages; measures of variation and skewness, probable error; time series; measurement of trend; measurement of relationship; linear and non-linear correlation; curve fitting; normal curve of error. First course in Statistical Method, G. I. Gavett (McGraw-Hill Book Co.). A First Course in Statistics, D. C. Jones. References: Statistical Methods, F. C. Mills (Henry Holt & Co.); Introduction to Statistics, G. U. Yule. Two hours per week; for students in Arts and Science.
- 77. Theory of Probability. The general theory of probability; inverse probability; the mortality table; probabilities of life; expectations of life; survivorship probabilities; formulae for the law of mortality. Hall and Knight's Higher Algebra; Actuarial Mathematics, H. Freeman; Life Contingencies, by E. F. Spurgeon (C. & E. Layton). Reference: Introduction to Mathematical Probability, J. L. Coolidge. Two hours per week; for students in Arts and Science.
- 78. FINITE DIFFERENCES. A course of lectures on the Calculus of Finite Differences and the Theory of Operators. Fundamental difference forms; factorial expansions; symbols of operation; Herschel's and Maclaurin's Theorems; interpolation formulae; central difference formulae; approximations, mechanical quadratures, finite integration, Euler-Maclaurin sum series, Lubbock's, Woolhouse's and Hardy's formulae, convergency, difference equations. Actuarial Mathematics, H. Freeman (Cambridge University Press). Reference: Burn and Brown, The Elements of Finite Differences. Two hours per week; for students in Arts and Science.
- 79, 80. LIFE CONTINGENCIES. Application of the Calculus and Finite Differences to Life Contingencies. Mortality tables; single-life probabilities of life and death; single-life annuities and assurances; statistical applications of the mortality table; functions involving two or more lives; compound and survivorship probabilities; contingent probabilities; joint life and last survivor annuities and assurances; contingent assurances; reversionary annuities; construction of tables; tables involving two or more causes of decrement and functions dependent thereon; disability notation; accident and disability benefits; general nature of life insurance and annuity

contracts; life insurance history; group insurance; industrial life insurance; fraternal insurance. Life contingencies. E. F. Spurgeon (C. & E. Layton); Disability Benefits, Arthur Hunter (Actuarial Society of America. References: Life Insurance, J. B. MacLean (McGraw-Hill Book Co.); Introductive to the Mathematics of Life Insurance, Menge and Glover (Macmillan). Four hours per week; for students in Arts and Science.

86. The Theory of Errors and Method of Least Squares. See Applied Mathematics, Course 54.

ASTRONOMY

- 89. Spherical Trigonometry. Derivation of formulate, solution of the spherical triangle, areas of spherical triangles and polygons, applications to practical problems in geodesy and astronomy. Murray, Spherical Trigonometry (Macmillan). Two hours per week; for students in Engineering.
- 91, 92. General Astronomy. A study of the skies; evening observations; methods of locating celestial objects; the shape and motions of the earth; the sun and eclipses; the moon; the planets; comets and meteors; the sidereal universe; nebulae; modern conceptions of the Universe; recent astronomical discoveries. Text Book: An Introduction to Astronomy, by F. R. Moulton (new edition). Star Guide for Beginners, H. R. Kingston; Phillips' Planisphere. Two hours per week; for students in Arts and Science.
- 93. Descriptive and General Astronomy. A short course specially devoted to those parts of astronomy necessary to surveying. The shape and motions of the earth; the constellations; systems of co-ordinates; refraction; aberration; parallax, eclipses; time, equation of time, conversion of time. Moulton, Introduction to Astronomy. Two hours per week; evening observations; for students in Engineering.
- 96. Mathematical and Practical Astronomy. The solution of the astronomical triangle; time; conversion of time; the ephemeris; determination for any date of the apparent places of stars from the star catalogues; corrections for refraction, parallax, diurnal aberration and dip, to be applied to observed co-ordinates; description and working principles of the sextant, transit theodolite, observatory transit, and zenith telescope; the errors of these instruments and methods of dealing with them; methods of determining latitude, time, longitude and azimuth; practical observations and their reduction. Two hours per week; for students in Science and Engineering.
- 97, 98. Celestial Mechanics. See Applied Mathematics, course 61, 62.

GRADUATE COURSES

Graduate courses cannot normally be given as full lecture courses. Students with a General degree from this University, or its equivalent, will take such undergraduate courses as are available and have not already been taken by them, until the equivalent of the Honors degree is reached. Thereafter such courses may be taken but full credit values as graduate courses will not normally be allowed. The following courses have been given from time to time,

partly as lecture and partly as reading courses, and will be offered again as required. Their extent also will vary according to circumstances. They should not therefore be understood as necessarily carrying the same weight as undergraduate courses.

Students are advised that admission to courses as a graduate student does not imply admission to candidacy for the M.A. degree. Admission to the latter will be granted only if the student's work gives reasonable promise of ability to complete his thesis for that degree.

101—Algebraic Invariants.102—Theory of Functions of a Real Variable.103—Calculus of Variations (Elementary Course).

104—Elliptic Integrals and Fourier Series.

- 105-Theory of Functions of a Complex Variable (Second Course).
- 106—Applied Analysis.
- 107-Vector Analysis. 108-Modern Geometry.
- 109—Differential Geometry.

110—Elliptic Functions.

- 111—Celestial Mechanics I and II.
- 112—Actuarial Science I, II, III and IV.
 113—Theory of Relativity.
 114—Casualty Actuarial Theory.
 115—Mathematical Theory of Statistics.
 116—Theory of Numbers.
 119—Algebraic Numbers.

- 120-Modern Higher Algebra.

DEPARTMENT OF PHILOSOPHY AND PSYCHOLOGY

*Rupert C. Lodge, M.A. (Oxon) Professor of Logic and History of Philosophy Henry W. Wright, Ph. D. Professor of Psychology
Marcus Long, B.A. Interim Lecturer in Philosophy

PHILOSOPHY

Philosophy II—Course 1, 2. This may be combined with Psychology

PHILOSOPHY III—Course 3, 4.

PHILOSOPHY IV—Course 5, 6.

PHILOSOPHY IV G—Courses 5, 6, combined with Psychology 7, 8.

Philosophy IV H—Courses 5, 6; 7, 8; and other work as directed. Other combinations may be permitted by the examiners in Philosophy.

1, 2. Logic. Cohen and Nagel, Introduction to Logic. First Terms—Chapter I-IV, VIII, IX. Second Term—Book II. Alternative Text, Sellars' Essentials of Logic. First Term—To end of chapter XIII. Second Term—Chapter XIV to end of book. Two hours a week. *Professor Lodge*.

^{*}On leave, 1937-1938.

- 3, 4. History of Philosophy (Ancient and Mediæval). First Term—Bakewell, Source-book in Ancient Philosophy, pages 1 to 179; Plato Republic; Rogers, Student's History of Philosophy, pages 1 to 101. Second Term—Aristotle, Ethics; Bakewell, Source-book, pages 217 to 393; Rand, Classical Moralists, Selections from St. Augustine, Abelard, and St. Thomas; Rogers, Student's History, from page 101 to end of mediæval period. Four hours a week. Professor Lodge.
- 5, 6. History of Philosophy (Modern). First Term—Rand, Classical Modern Philosophers, selections from Bruno to Locke, inclusive, and also Condillac; Rogers, Student's History of Philosophy, Modern period, to Locke. Second Term—Rand, selections from Berkeley, Hume, and Kant to Hegel, inclusive; Rogers, to end of Hegel. Four hours a week. Professor Lodge.
- 7, 8. Seminar in Philosophy. Two hours a week. Professor Lodge.

PSYCHOLOGY

PSYCHOLOGY II—Course 1, 2. This may be combined with Philosophy 1. 2.

Psychology III—Courses 3, 4, 5, 6. (1, 2 in advance or 3, 4 concurrently is required with 5, 6.)

PSYCHOLOGY IV G—Course 7, 8, with Philosophy 5, 6.

Psychology IV H—Courses 7, 8; 9, 10.

Psychology V—Courses 9, 10, 11, 12.

- 1, 2, Introductory Psychology. Woodworth's Psychology (Edition of 1934.) First Term—To page 221. Second Term—Remaining chapters. Two hours a week. *Professor Wright*.
- 3, 4. Objective Psychology, with exercises and experiments. Perrin's Psychology. Two hours a week. *Professor Wright*.
- 5, 6. Social Psychology. First Term—Ewer, Social Psycholology. Second Term—Wright, Moral Standards of Democracy. Two hours a week. *Professor Wright*.
- 7, 8. Abnormal Psychology in First Term. Second Term—Analysis, Measurement and Organization of Personality. Four hours a week. *Professor Wright*.
- 9, 10. Contemporary Psychological Theory. (Content of this course will alternate in successive years.) Four hours a week. *Professor Wright*.
- 11, 12. Mental Tests and Measurements. (A course in this subject in the Faculty of Education is open to Fifth Year and M.A. students of Psychology.) Four hours a week.

Other under-graduate courses, instruction in which is not provided at the University, but which may be studied for the B.A. degree:

3a, 4a. Ethics and Introduction to Philosophy. Urban's Fundamentals of Ethics, or Lodge's The Questioning Mind. Two hours a week. (May be substituted for, or combined with Philosophy 1, 2; or Psychology 1, 2.

- 21, 22. Philosophy of Religion. Galloway, Philosophy of Religion. Two hours a week.
- 23, 24. PROBLEMS OF PHILOSOPHY. Patrick. Introduction to Philosophy. First Term—To page 208. Second Term—Remaining chapters. Two hours a week.
- 25, 26. Problems of Psychology and Social Adjustment. Two hours a week.
- 27, 28. Advanced Ethics. Dewey and Tufts, Ethics. Two hours a week. (May be substituted for 21, 22.)
 - 29, 30. Social Philosophy. Four hours a week.
- 39, 40. SCHOLASTIC PHILOSOPHY II—LOGIC and EPISTEMOLOGY. A. C. Cotter, S.J., Logic and Epistemology. First Term—Logic, with references to Bittle, The Science of Correct Thinking; Cohen and Nagel, Introduction to Logic; Sellars, Logic; Mercier, Logic; Maritain, Eléments de Philosophie. Second Term—Epistemology, with references in Cunningham, Epistemology; Mercier, Manual of Scholastic Philosophy; Maritain, Eléments de Philosophie. Two hours a week.
- 41, 42. SCHOLASTIC PHILOSOPHY II—PSYCHOLOGY. Barrett, Elements of Psychology; with references to Hill, Mercier, and Coffey; D. Barbedette, Cours de Philosophie Scholastique (Tome II). Two hours a week.
- 43, 44. Scholastic Philosophy III—Ethics. Reading in Ethics, Leibell, with references to Cronin, Ethics; Mercier, Manual of Scholastic Philosophy; Sullivan, Ethics; D. Barbedette, Cours de Philosophie Scholastique (Tome II). Four hours a week.
- 45, 46. SCHOLASTIC PHILOSOPHY IV—METAPHYSICS. McCormick, Scholastic Metaphysics, with references to Mercier, Manuel of Schoology; Coffey, Ontology; Windle, Church and Science; D. Barbedette, Cours de Philosophie Scholastique (Tome I). Four hours a week.
- 47, 48. SCHOLASTIC PHILOSOPHY IV—HISTORY OF PHILOSOPHY. Turner, History of Philosophy; with references to Thilly, Burnet (Greek Philosophy), De Wulf (Mediæval Philosophy), and Perry (Present Day); D. Barbedette, Histoire de la Philosophie. Four hours a week.

Note—Courses 45, 46 and 47, 48 may be combined as Scholastic Philosophy IV G.

GRADUATE COURSES

Students intending to take graduate work in Philosophy or Psychology should in all cases consult the Examiners in Philosoph in order to ascertain what type of problem they are fitted to investigate.

DEPARTMENT OF PHYSICS

| Frank Allen, M.A., Ph.D., LL.D., F.R.S.C. | Professor |
|---|---------------------|
| R. K. McClung, M.A., D.Sc., F.R.S.C. | Associate Professor |
| J. F. T. Young, M.A., Ph.D. | Associate Professor |
| W. A. Anderson, M.A., M.Sc. | Assistant Professor |
| P. A. Macdonald, M.Sc., Ph.D. | Assistant Professor |
| H. F. Batho, B.A., S.M., Ph.D. | Lecturer |

Physics I A-Courses 1a, 2a.

Physics I—Courses 1, 2. (Prerequisite, Grade XI Physics.)

Physics II—Courses 5, 6. (Prerequisite, Grade XII Physics or Physics I.)

Physics II M—Courses 3, 4. (Prerequisite, Grade XII Physics or Physics I.)

Physics III—Courses 7, 8; 9, 10. (Prerequisite, Physics II.)

Physics IV—Courses 17, 18; 19, 20. (Prerequisite, Physics II and Physics III.)

Physics IV H—Courses 17, 18; 19, 20, and four credits in Honors Courses (Prerequisite Mathematics II, at least.)

Physics V-Eight credits in Honors Courses.

Second Year Pharmacy-Courses 1, 2.

First Year Pharmacy (Degree Course)—Courses 1, 2.

Second Year Pharmacy (Degree Course)—Courses 5. 6.

First Year Engineering—Courses 11, 12.

Second Year Engineering—Courses 13; 14.

Third Year Engineering (Electrical)—Courses 15, 16.

First Year Architecture—Courses 1, 2.

Second Year Architecture—Courses 11: 12.

The following courses are designed to give a consecutive treatment of both Theoretical and Practical Physics covering the four years of the general course in Arts and Science*.

Physics I—Courses 1, 2.

Physics II—Courses 5, 6.

Physics III—Courses 7, 8; 9, 10.

Physics IV—Courses 17, 18; 19, 20.

Students intending to enter courses in Physics in the Senior Honors Division in Science are advised to consult pages 40-41 for guidance as to choice of subjects in the Junior Division and in the First Year of the Senior Division.

N.B.—For key to system of numbering courses, see page 5.

^{*}A knowledge of Trigonometry is highly desirable in the study of Elementary Physics. Students may obtain this in Mathematics I A or Mathematics II A.

- 1a, 2a. General Physics. A course in General Physics, consisting of lectures, demonstration experiments and laboratory experiments. First Term—Mechanics and Heat. Second Term—Sound, Electricity and Light. Four lectures and one laboratory period per week. For students without Grade XI Physics. Text book: New Practical Physics, Black and Davis.
- 1, 2. General Physics. A course in General Physics, consisting of lectures, demonstration experiments, and laboratory experiments. First Term—Mechanics and Heat. Second Term—Electricity and Light. Three lectures and one laboratory period per week. For students with Grade XI Physics. Text book: New Practical Physics, Black and Davis.
- 3, 4. General Physics (Practical). A laboratory course specially designed to illustrate those principles of Physics which are of particular service in Medicine. This course is intended only for students preparing to enter the Faculty of Medicine and is not open for election by students proceeding to the B.A. or the B.Sc. degree. Text book: Physics II M Laboratory Manual. One practical period per week.
- 5. Mechanics and Properties of Matter. A course giving a more detailed treatment of the subjects than in Course 1, 2. Consists of lectures, demonstration experiments and laboratory experiments. Three lectures and one laboratory period per week.
- 6. Heat and Sound. A course similar in character to Course 5. Three lectures and one laboratory period per week. Text books: A Text Book of Heat, Stewart and Satterly; A Text Book of Sound, Catchpool.
- 7. Light. A course giving a more detailed treatment of the subject than in Course 2. Three lectures per week.
- 8. ELECTRICITY AND MAGNETISM. This course is similar in character to Course 7. Three lectures per week.
- 9, 10. Light, Electricity and Magnetism. A laboratory course to accompany the lecture Courses 7, 8. One practical period per week for each student.
- 11, 12. Heat, Light and Sound. This course is designed to meet the requirements of Engineering students of the First Year. Two lectures and one laboratory period per week.
- 13, 14. Electricity and Magnetism. This course is designed to meet the requirements of Engineering students of the Second Year. Two lectures and one laboratory period per week.
- 15, 16. ELECTRICAL MEASUREMENTS. This course comprises a more advanced study, both theoretical and practical, of electrical measurements and is especially suited to students in Electrical Engineering. It will involve the use of electrical standards, quantitative measurements of capacity of condensers, self and mutual induction, magnetic induction and hysteresis, potentiometer measurements, high and low resistance and photometry.
- 17. Molecular Theory of Matter. A general course including elementary kinetic theory and experimental verifications and deductions by various methods of the size, number, nature and ar-

rangement of molecules in matter. Reference texts: Eldridge, The Physical Basis of Things; Crowther, Molecular Physics; Perrin, Atoms. Three hours per week.

- 18. Modern Atomic Theories. An introductory course on the basis and development of modern Physics. Reference texts: Crowther, Ions, Electrons and Ionising Radiations; Richtmeyer, Introduction to Modern Physics; Andrade, The Structure of the Atom. Three hours per week.
- 19, 20. Advanced Physical Measurements. One practical period per week.

Reference Text: Advanced Electrical Measurements (Smyth and Michels.)

HONORS COURSES

The methods of the calculus will be used in these courses and students will be required to have a sound knowledge of both Differential and Integral Calculus. Mathematics II is a prerequisite.

The courses to be given in any year will be selected by the Department from the following:

- 17, 18. As above. Three hours per week.
- 19, 20. As above. One period per week.
- 21, 22. Advanced Electricity and Magnetism. This course will include Theory of Potential and Elementary Electromagnetic Theory. Reference Books: Starling, Electricity and Magnetism; Jeans, Electricity and Magnetism. Three hours per week. Associate Professor Young.
- 23, 24. Advanced Heat and Elementary Thermodynamics. Reference Books: Roberts, Heat and Thermodynamics; Preston, Theory of Heat; Birtwistle, Thermodynamics; Hart, Advanced Heat. Three hours per week. Associate Professor Young.
- 25, 26. Properties of Matter. A comprehensive treatment based on Poynting and Thompson, Properties of Matter; Newman and Searle, Properties of Matter. Two hours per week.
- 27, 28. Physical Optics. This course will include wave propagation, interference, diffraction, polarization. Text book: The Theory of Light, Preston. Three hours per week. *Professor Allen*.
- 29, 30. MATHEMATICAL PHYSICS. An introductory course based on Houston, An Introduction to Mathematical Physics. Two hours per week.
- 31, 32. Laboratory Course for Honors Students. This course is designed to illustrate the above lecture courses. One practical period per week in Fourth Year and two practical periods per week in Fifth Year. *Professor Allen and Associate Professor Young*.

GRADUATE COURSES

The Department will arrange courses for suitably prepared students in Physiological Optics and Acoustics, the Restricted Theory of Relativity, with physical applications, Atomic Structure, and Quantum Theory.

The laboratory and its equipment are available whenever possible to anyone desirous of engaging in original investigation in Physics.

For the treatment of cancer in the Province of Manitoba, there has been established a Cancer Relief and Research Institute which has purchased one gram of radium salt for its purpose.

This large quantity of radium has been placed in the custody of the Department of Physics, under the supervision of Assistant Professor Macdonald. A radium emanation plant is now in operation from which supplies of radium emanation are available for research.

Graduate students who are desirous of undertaking research work in this field will find ample opportunity for such investigations.

DEPARTMENT OF POLITICAL ECONOMY AND POLITICAL SCIENCE

| Robert McQueen, M.A. | Professor |
|--|---------------------|
| Reginald F. Jones, M.A. | Assistant Professor |
| Henry Clark Grant, B.S.A., M.A., Ph.D. | Assistant Professor |
| *William J. Waines, M.A. | Assistant Professor |
| Allely, J. S. M., M.A. | Interim Lecturer |

POLITICAL ECONOMY II—Courses 1, 2.

POLITICAL ECONOMY III—Courses 3, 4. (Beginning 1937-38, Prerequisite Economics II.)

POLITICAL ECONOMY III H—Courses 5, 6.

POLITICAL ECONOMY IV—Courses 7, 8. (Prerequisite, Political Economy III.)

POLITICAL ECONOMY IV G—Courses 7, 8; 9, 10. (Prerequisite, Political Economy III.)

POLITICAL ECONOMY IV H—Courses 7, 8; 9, 10. (Prerequisite, Political Economy III.)

POLITICAL ECONOMY V—Courses 11, 12; 15, 16.

POLITICAL ECONOMY FOR ACCOUNTANTS, BANKERS AND BUSINESS MEN—Courses 19, 20.

MASTER OF ARTS—Courses will be arranged to meet the requirement of the student.

N.B.—For key to system of numbering courses, see page 5.

1, 2, Economics. A half-subject elementary course which aims to acquaint the student with the historical and geographical background of the present world economy. Text to be announced later. Two hours a week.

^{*}On leave, 1936-37.

3, 4. Principles of Economics. An intensive study of the principle of Economics and some of their applications, together with a brief survey of the development of economic theory. Texts: Garver and Hansen, "Principles of Economics"; Price, "Political Economy in England."

For Reference: "Report of the Royal Commission on Banking and Currency in Canada, 1933"; Wright, "Population"; Robinson, "The Structure of Competitive Industry"; Withers, "The Meaning of Money"; "The Encyclopaedia of the Social Sciences." Four hours per week.

- 5, 6. Students contemplating a III H Course will consult the Department at the beginning of the term.
- 7. International Trade and International Commercial Policies. The theory of international trade and the exchanges, international economic policies and current problems of trade and foreign relations will be discussed. The student should possess: Taussig, "International Trade"; Bastable, "The Commerce of Nations"; Viner, "Canada's Balance of International Indebtedness". Further references will be given as the course proceeds. Four hours a week.
- 8. Functions of Government, Public Finance and Financial Administration. The economic functions of government and government finance, with special reference to the problems of Canadian finance, will be considered. The student should possess: Silverman, "Taxation: Its Incidence and Effects." Further references will be given as the course proceeds. Four hours a week.
- 9, 10. Money, Banking and the Business Cycle. The principles of commercial and non-commercial banking; foreign banking systems and the mechanisms of international banking; the foreign exchanges and money markets; central banking and monetary policy; monetary aspects of the business cycle. The student should possess: Bradford, "Money and Banking"; MacKenzie "The Banking Systems of Great Britain, France, Germany and the United States"; Hardy, "Credit Policies of the Federal Reserve System"; Spalding, "The London Money Market." Further references will be given as the course proceeds. Four hours a week.
- 11, 12. Advanced Economic Theory and History of Economic Theory. The course aims to cover the history of economic theory by means of reading assignments, and the lectures are devoted to an examination of some of the more difficult problems in current economic theory. Texts: Marshall, "Principles of Economics"; Robbins, "The Nature and Significance of Economic Science"; Cassel, "Principles of Social Economy"; Cannan, "Review of Economic Theory." References will be made to the works of Fisher, Knight, Böhm-Bawerk, J. B. Clark, Pigou, and others. Four hours a week.
- 15, 16. POLITICAL SCIENCE. A critical study of political theories in relation to actual political development, and a survey of comparative politics. The nature and origin of the state; forms of government; the sphere of the state; principles, methods and limitations of governmental interference; the organization of government; distribution of powers.

For reading in supplement of the lectures students will be referred to: "The Encyclopaedia of the Social Sciences"; Pollock, "History of the Science of Politics"; Brown, "English Political Theory";

Hobbes, "Leviathan"; Locks, "Civil Government"; Rousseau, "Social Contract"; MacIver, "The Modern State"; Mill, "Representative Government"; "On Liberty"; Bagehot, "The English Constitution"; Lowell, "The Government of England" and "Governments and Parties in Continental Europe"; Bryce, "The American Commonwealth," "Studies in History and Jurisprudence" and "Modern Democracies"; Keith, "Responsible Government in the Dominions" and "Imperial Unity and the Dominions"; Zimmern, "The Greek Commonwealth"; W. Warde Fowler, "City State of the Greeks and Romans"; de Burgh, "Legacy of the Ancient World"; Brett, "The Government of Man"; Brogan, "The American Political System"; Brady, "Canada"; "Proceedings of the Canadian Political Science Association"; Brailsford, "Shelley, Godwin and their Circle"; "The Works of Edmund Burke"; "Political Thought" series in the Home University Library, and other works. Four hours a week.

- 17. ECONOMIC HISTORY—MEDIAEVAL. A study of the Economic History of England to the end of the Middle Ages. Cunningham, "Growth of English Industry and Commerce," Vol. I; Lipson, "Economic History of England—The Middle Ages"; Knight, "Economic History of Europe to the end of the Middle Ages." Further references will be given as the course proceeds. Four hours a week. (Not given in 1937-38.)
- 18. Economic History—Modern. A study of the Economic History of England since the Middle Ages. Cunningham, "Growth of English Industry and Commerce," Vols. II and III; Clapham, "Economic History of Modern Britain, 1820-1850," and "Economic History of Modern Britain, 1850-1886"; Lipson, "Economic History of England," Vol. II and III; Knight, Barnes and Flugel, "Economic History of Europe in Modern Times." Further references will be given as the course proceeds. Four hours a week. (Not given in 1937-38.)
- 19, 20. Political Economy. A general survey of the principles governing production and distribution of wealth; and a more intensive study of the theory of exchange, including value, money, credit, banking, the money market, the rate of interest and the rate of discount, international trade, the foreign exchanges, and the stock exchange. Text: Garver and Hansen, "Principles of Economics." Further references will be given as the course proceeds.

SOCIOLOGY

Reginald F. Jones, M.A.

Assistant Professor

PRINCIPLES OF SOCIOLOGY—Courses 1, 2. APPLIED SOCIOLOGY—Courses 3, 4.

N.B.-For key to system of numbering courses, see page 5.

1, 2. Sociology. (a) First Term—Character and Scope of Sociology, and its relations to Biology, Psychology, Social Psychology, History, Political Economy, and the various social sciences. Methods of Investigation. Society and the Individual. Origin and Evolution

of Society. Forms of Association. Socializing Processes. Social Organization. History of Sociology.

(b) Second Term—Social Forces, their direction and control. Theory of Social Progress. Social Laws. Social Activities, including conflict and competition, adaptation, exploitation and stratification. Law and Liberty in Society. Relations between various social groups, racial, national, etc. Social Achievement. Social Ends. Four hours per week.

Works of Reference—In calling the attention of students to the following list of books bearing on certain of the subjects to be studied, the examiners in Sociology give notice: (1) That the list is intended for general guidance only, and that all students should take personal advice as to their reading, and (2) that the examiners

are in no way bound by this list.

"The Encyclopaedia of the Social Sciences"; Giddings, "Principles of Sociology"; Ross, "Principles of Sociology"; Spencer, "The Study of Sociology"; Spencer, "Principles of Sociology"; Bagehot, "Physics and Politics"; Mueller-Lyer, "History of Social Development"; Barth, "Die Philosophe des Geschichte als Soziologie"; Park and Burgess, "Introduction to Sociology"; R. M. MacIver, "Social Science"; R. M. MacIver, "Community"; Cooley, "Social Organization"; James Ford, "Social Problems and Social Policy"; Dealey, "Sociology: Its Development and Applications"; C. A. Dawson and W. E. Gettys, "An Introduction to Sociology"; Kimball Young, "Introduction to Sociology." "Introduction to Sociology."

In addition, the "Encyclopaedia of Religion and Ethics" and various general encyclopaedias contain many articles on sociological

subjects.

APPLIED SOCIOLOGY. (a) First Term—Character and 3, 4. Scope of Applied Sociology. Personal Relations. Voluntary Associations. Social Institutions; Marriage and the Family; the Church, Education. Social Control by means of the State the exception rather than the rule; Direct State Control illustrated by selected groups of instances, e.g., Public Administration and the Civil Service, Relations between Parliament and certain Boards or Commissions, Methods of regulating certain kinds of trade, etc.

(b) Second Term-Normal Functions of Society with little or no State Control; illustrations from Business, Law, Medicine, etc., considered in their social aspects. The Economic Problem; the predominance of Private Enterprise, and the scope of Public Ownership and Public Management in certain instances. Population and Immigration. Social Pathology: Poverty, Public and Private Relief; Mental Deficiency; Crime, Juvenile Delinquency, Probation, Prisons and Parole. Principles and Methods of Social Reform and Improvement. Four hours per week.

Works of Reference-In calling the attention of students to the following list of books bearing on certain of the subjects to be studied, the examiners in Sociology give notice: (1) That the list is intended for general guidance only, and that all students should take personal advice as to their reading; and (2) that the examiners are in no way bound by this list.

"The Encyclopaedia of the Social Sciences"; James Ford, "Social Problems and Social Policy"; R. M. MacIver, "Society: Its Structure and Changes"; Lester F. Ward, "Applied Sociology"; Ross, "Principles of Sociology"; W. G. Summer, "Folkways"; Helen Bosanquet, "The Family"; The Canada Year Book and other publications of the Dominion Bureau of Statistics; Robert M. Dawson, "The Principle of Official Independence, with particular reference to Canada"; R. M. Dawson, "The Civil Service of Canada"; William A. Robson, "From Patronage to Proficiency in the Public Service"; R. G. Hawtrey, "The Economic Problem"; F. Creedy, "Human Nature in Business"; A. M. Carr-Saunders, "Professions: Their Organization and Place in Society"; C. Delisle Burns, "An Introduction to the Social Sciences."

DEPARTMENT OF ZOOLOGY

| Robert A. Wardle, M.Sc., F.R.S.C. | Professor |
|-----------------------------------|---------------------|
| Ferris Neave, M.Sc. | Assistant Professor |
| Vincent W. Jackson, B.A., M.S. | Assistant Professor |

ZOOLOGY II—Courses 1, 2.

ZOOLOGY II M—Courses 3, 4,

Zoology III—Courses 5, 6.

Zoology III A—Courses 7, 8.

Zoology III H—Courses 9, 10.

ZOOLOGY IV—Courses 11, 12,

ZOOLOGY IV H—Courses 11, 12; 15, 16, (1937--38).

Zoology V—Courses 13, 14; 15, 16, (1937-38).

Students intending to enter courses in Zoology in the Senior Division are advised to consult pages 41-42, or consult the Professor of Zoology, for advice as to choice of subjects in the Junior Division and in the first year Senior Division.

N.B.—For key to system of numbering courses, see page 5.

- 1, 2. ELEMENTARY ZOOLOGY. The principles of animal classification, anatomy, histology and embryology, illustrated by a series of representative animal types. For second year students in Arts, Science, Agriculture and Home Economics: Two lectures per week, and two laboratory hours each two weeks throughout the session. The lectures and laboratory work for Agriculture and Home Economics students will be given at Fort Garry. Texts: Introduction to Biology (Rice); Laboratory Manual (Jackson).
- 3, 4. General Zoology. Anatomy of frog and mammal; elementary histology; chordate embryology; human physiology; animal genetics; medical parasitology; organic evolution; anthropology. For Pre-Medical students and Science students proceeding to senior Zoology. Three lectures and three laboratory hours per week throughout the session. Text: Zoology for Medical Students (Borradaile).
- 5, 6. Invertebrate Zoology. Structure, habits, classification of invertebrate animals. For third year Science students. Three lectures and three laboratory hours per week throughout the session. Text: *Invertebrate Zoology* (Hegner).
- 7, 8. Eugenics. Principles of heredity; general phenomena and hypotheses of Mendelian heredity; application of facts of heredity to human sociology. For third year students in Science, Agri-

culture and Home Economics. Two lectures per week throughout the session. Texts: *Genetics and Eugenics* (Fasten); *Problems of Heredity* (Jackson).

- 9, 10. ZOOLOGICAL THEORY. History and status of principal hypotheses of biology. For Third Year Honours students in Science. One lecture or seminar per week throughout the session.
- 11. General Entomology. Introduction to structure, physiology and classification of insects. For Fourth Year Science students. Two lectures and six laboratory hours per week during the first term. Text: *General Entomology* (Wardle).
- 12. Chordate Zoology. Structure, physiology and classification of vertebrate animals. For Fourth Year Science students and Agricultural students (Animal Science option). Two lectures and six laboratory hours per week during the second term. Text: Vertebrate Zoology (Adams).
- 13. ANIMAL PARASITOLOGY. Structure, life cycle, pathogenicity of the protozoan, helminth and arthropodan parasites of man, domesticated animals, fur-bearing animals and fishes. For Agricultural students (Animal Science option) and Fifth Year Science students. Two lectures and three laboratory hours per week during the first term. Science students will attend an additional lecture per week on Advanced Parasitology.
- 14. Chordate Emryology. An outline of the embryology of the Chordata. For Fifth Year Science students. Two lectures or seminars and six laboratory hours per week during one term.
- 15. Comparative Histology. Two seminars and six laboratory hours per week during one term.
- 16. Animal Genetics. Two seminars per week and a course of assigned reading and essay writing, during one term.
- 17. Experimental Zoology. Two seminars and six laboratory hours per week during one term (not given in 1937-38).
- 18. Animal Conservation. Two seminars per week and a course of assigned reading and essay writing during one term (not given in 1937-38).

Departmental Requirements for the Degree of Master of Science or Master of Arts

Candidates with the degree of Bachelor of Arts or Bachelor of Science in the General Course must complete *two* years of work in the Department of Zoology and must attend—

(1) In the first year of graduate work the courses comprised in Zoology V, together with further courses to the value of eight units, in some other Department.

(2) In the second year of graduate work, must complete and pass examinations in a Major and a Minor Subject.

Candidates with an Honours Degree must complete one year of work in the Department of Zoology and must complete and pass examinations in a Major and a Minor subject.

All candidates will be required to submit a thesis based upon original work carried out under the direction of the Department of Zoology, and presented in a condition suitable for publication.

For general requirements for the M.A. and M.Sc. degrees, refer to pages 35-37 and 45-47.

BIBLICAL LITERATURE

Instruction in Biblical Literature is provided only in the affiliated Colleges.

BIBLICAL LITERATURE A—Courses 1 or 1a, 2 or 2a, 5 or 5a, 6 or 6a. BIBLICAL LITERATURE B—Courses 3 or 3a, 4 or 4a, 7 or 7a, 8 or 8a. Biblical Literature A and B are offered in alternate years. Biblical Literature B will be offered in 1937–38.

Hebrew Students may substitute for Biblical Literature 7 and 8, Hebrew Courses 7 and 8 or 11 and 12.

OLD TESTAMENT—ANCIEN TESTAMENT

- 1. The Early Period. The books concerning the history, archæology and religious development of Israel from the earliest times till the Conquest of Canaan, with minute investigations of selected passages. Reference books to be later assigned. Two hours a week with assigned work. (1938-39.)
- 1a. Les Débuts. Les livres qui contiennent l'histoire, l'archéologie, et la réligion d'Israël depuis le commencement jusqu'à la conquête de Chanaan. On fera l'étude approfondie de quelques passages choisis. Références: La Sainte Bible (traduction française) par A. Crampon; J. B. Pelt, L'Histoire de l'Ancien Testament; J. Renie, s.m. Manuel d'Ecriture Sainte; les articles concernant cette matière dans la Dictionnaire d'Apologétique. Deux heures par semaine. Travaux personnels.
- 2. The Monarchy. The books concerning the history, archæology and religious development of Israel and Judah from the time of the Judges to the end of Hezekiah's reign. Reference books to be later assigned. Two hours a week with assigned essay work. (1938-1939).
- 2a. La Monarchie. Les livres qui contiennent l'histoire, l'archéologie, et la réligion d'Israël et de Jude depuis la période des Juges jusqu'à la fin du règne d'Ezéchias. Références: les mêmes que dans le premier Cours. Deux heures par semaine. Travaux personnels.
- 3. The Exile. The books concerning the history, archæology and religious development of the Jewish Kingdom from the reign of Manasseh till the close of the Babylonian Exile, with minute investigations of selected passages. Books of reference: English Bible (revised version) or that of the Jewish Publication Society; Kent, Kings and Prophets, Makers and Teachers of Judaism; Clarendon Bible, vols. III, IV, V; G. A. Smith, Historical Geography of the Holy Land, Isaiah vol. II, The Book of the Twelve, vol. II, Deuteronomy, Jeremiah; Cambridge and Century Bibles, Isaiah vol. II, Deuteronomy, Jeremiah, Minor Prophets vol II, Job, Daniel; Barton, Archaelogy and the Bible; Oesterley and Robinson, History of Israel, Introduction to the Books of the Old Testament, Hebrew Religion; Peake's Commentary; Abingdon Commentary. Two hours a week with assigned essay work. (1937-38.)

- 3a. L'Exil. Les livres qui contiennent l'histoire, l'archéologie, et la réligion du peuple juif depuis le règne de Manassé jusqu'à la fin de l'exil de Babylone. On fera l'étude approfondie de quelques passages choisis. Références: les mêmes que dans le premier Cours et L. Desnoyers, L'Histoire du peuple juif. Deux heures par semaine. Travaux personnels.
- 4. Post-Exile Times. The books concerning the history, archæology and religious development of the Jewish Community from the Return from the Babylonian Captivity till the Roman Period, with minute investigations of selected passages. Books of reference: English Bible (revised version) or that of the Jewish Publication Society; Kent, Kings and Prophets, Makers and Teachers of Judaism; Clarendon Bible, vols. III, IV, V; G. A. Smith, Historical Geography of the Holy Land, Isaiah vol. II, The Book of the Twelve vol. II, Deuteronomy, Jeremiah; Cambridge and Century Bibles, Isaiah vol. II, Deuteronomy, Jeremiah, Minor Prophets vol. II, Job, Daniel; Barton, Archaelogy and the Bible; Oesterley and Robinson, History of Israel, Introduction to the Books of the Old Testament, Hebrew Religion; Peake's Commentary; Abingdon Commentary. Two hours a week with assigned essay work. (1937-38.)
- 4a. La période post-exilienne. Les livres qui contiennent l'histoire, l'archéologie, et la religion du peuple juif depuis le retour de la Captivité de Babylone jusqu'à la période romaine. On fera l'étude approfondie de quelques passages choisis. Références: les mêmes que dans le troisième Cours. Deux heures par semaine. Travaux personnels.

NEW TESTAMENT—NOUVEAU TESTAMENT

- 5. The political, economic and religious background of the times of Jesus beginning with the Roman Period. The life of Jesus, with a critical study of the Synoptic Gospels as sources for the life of Jesus, involving a consideration of the authorship, aim, and characteristics of these Gospels. References: J. S. Riggs, History of the Jewish People, Greek and Roman Periods; John MacKay, The Life of Lives; J. F. Bethune-Baker, Early Traditions about Jesus; Vincent Taylor, The Gospels. Two hours a week with assigned essay work. (1938-39.)
- 5a. L'état politique, économique et religieux au temps de Jésus à commencer avec la période romaine. La vie de Jésus. L'étude critique des évangiles synoptiques comme sources de la vie de Jésus portant sur l'authenticité, le but, et le caractère des ces évangiles. Références: La Sainte Bible, Crampon; J. Bonsirvin, Les idées juives au temps de N. T. et Le monde gréco-romain à l'époque de N. T.; N. J. La Grange, L'Evangile de Jésus-Christ et Synopse des Quarte Evangiles; Verbum Salutis, Matthieu, Marc, Luc, La vie et l'enseignement de Jésus; G. De Rancourt, La Vérité sur Jésus de Nazareth. Deux heures par semaine. Travaux personnels.
- 6. The History of the Christian Church from the death of Jesus to the destruction of Jerusalem, with a detailed study of the life of Paul. The Acts of the Apostles will be studied in the Revised Version as the source of the history of the Early Church and of the life of Paul. The aim, authorship and characteristics of the Acts will receive special consideration. References: A. W. F. Blount, *The Acts*

of the Apostles; John MacKay, Life of St. Paul; Sir Wm. Ramsay, St. Paul, the Traveller and Roman Citizen. Two hours a week with assigned essay work. (1938-39.)

- 6a. L'histoire de l'Eglise chrétienne depuis la mort de Jésus jusqu'à la destruction de Jérusalem. Une étude detaillie de la vie de Paul. Les Actes des Apôtres serviront de base à l'histoire de la primitive eglise et à la vie de Paul. On étudiera de façon spéciale le but, l'authenticité et la caractère du livre des Actes. Références: La Sainte Bible, Crampon; Verbum Salutis, Les Actes des Apôtres; E. Jacquier, Histoire des livres du N. T., Vol. III; S. Prat, La Théologie de S. Paul et La vie de S. Paul; J. Le Breton, La vie chrétienne au 1er siècle de l'Eglise. Deux heures par semaine. Travaux personnels.
- 7. The Growth of the Christian Literature, involving a study of its language, the making of the books, and their transmission. The following epistles of the New Testament will in addition be critically studied: Romans, I and II Corinthians, Philippians, I Timothy and I Peter. The study of these epistles will include such topics as: The contents, the teachings, the date, the authorship, the genuineness and the circumstances surrounding the composition of each. References: J. Paterson Smyth, The Bible in the Making; J. H. Moulton, From Egyptian Rubbish-Heaps; C. F. Hunter, The Life History of the New Testament; G. Milligan, The N. T. Christian Documents; for relevant articles and the epistles concerned, the Peake, Abingdon and Gore single-volume Bible commentaries and the Moffatt and Century commentaries. Two hours a week with assigned essay work. (1937-38.)
- 7a. Le développement de la littérature Chrétienne, la langue, style, composition, transmission. L'étude critique des épitres aux Romains, 1ere et 2de aux Corinthiens, aux Philippians, 1ere à Timothy, et 1ere de Pierre. Cette étude portera sur le contenu, la doctrine, la date, l'authenticité, la veracité, et les circonstances de la composition de chacune des ces épitres. Références: La Sainte Bible, Crampon; E. Jacquier, Histoire des Livres du N. T., Vol. III; S. Prat, La Théologie de S. Paul; Verbum Salutis, VIII. Les Epitres de la Captivité. Deux heures par samaine. Travaux personnels.
- 8. The Books of the New Testament appearing after 70 A.D., with a study of apocalyptic literature in the first century of the Christian era. This will involve a survey study of St. John's Gospel, the Epistle to the Hebrews, II Peter, Revelation. This will be followed by a survey of the stages through which the New Testament, Greek and English, has passed until the present Revised Version. References: E. F. Scott, The Fourth Gospel; E. J. Goodspeed, Hebrews (The Bible for Home and School); J. T. Dean, The Book of Revelation; James Orr, New Testament Apocrypal Writings (The Temple Bible); J. Paterson Smyth, How We Got Our Bible; for relevant articles and the books concerned, the Peake, Abingdon, and Gore single-volume Bible commentaries and the Moffatt and Century commentaries. Two hours a week with assigned essay work. (1937-1938.)
- 8a. Les livres derniers en date du N. T. L'étude de la littérature apocalyptique du premier siècle de l'ère Chrétienne. On étudiera l'évangile de S. Jean, l'épitre aux Hébreux, la 2de de Pièrre, et l'Apocalypse. On fera le relevé des différents étapes par lesquels

sont passés les livres du N. T. depuis les originaux grecs jusqu'à la traduction actuelle. Références: La Sainte Bible, Crampon; Verbum Salutis, IV. Jean; A. Merk, Histoire du Canon du N. T.; S. Prat, La Théologie de S. Paul; E. Jacquier, Histoire des Livres du N. T., Vol. III. Deux heures par semaine. Travaux personnels.

HEBREW

Instruction in Hebrew is provided only in the affiliated Colleges

HEBREW I-Courses 1, 2.

HEBREW II—Courses 3, 4. (Prerequisite, Hebrew I.)

Hebrew III—Courses 5 or 9; 6 or 10; 7, 8. (Prerequisite, Hebrew II.)

HEBREW IV—Courses 5 or 9, 6 or 10; 11, 12. (Prerequisite, Hebrew II.)

HEBREW IVH—Courses will be outlined on request.

HEBREW V-Courses will be outlined on request.

N.B.—For key to system of numbering courses, see page 5.

- 1, 2. Harper's Method and Manual (Smith). First Term, exercises 1-17, inclusive. Second Term, exercises 18-30, inclusive. Job, chapters 1, 2, 3, 42. Four hours.
- 3. 4. Harper's Method and Manual (Smith). First Term, exercises 31-44, inclusive. Second Term, exercises 45-56. Deuteronomy, chapters 5, 6; II Samuel, chapter 12; I Kings, chapter 42; Jeremiah, chapter 35; Psalms 15, 121. Four hours.
- 5. Hebrew, Legal and Historical. Exodus,, chapters 21, 22, 23, 24; II Chronicles, chapters 22, 23; I Kings, chapters 18, 19; II Kings, chapters 22, 23. Two hours.
- 6. Hebrew, Poetic, Prophetic, Narrative. Lamentations, chapter 3; Ezekiel, chapter 44; Isaiah, chapters 52, 53, 55; Haggai, chapter 1; Zechariah, chapters 7, 8; Malachi, chapter 1; Psalms 1, 42, 43, 79, 84, 100, 116, 150. Two hours.
- 7. THE EARLY HISTORY, ARCHAEOLOGY AND HISTORICAL GEOGRAPHY OF SYRIA AND PALESTINE. Paton, Syria and Palestine; Hall, The Near East; The Cambridge Ancient History; Oesterley and Robinson, A History of Israel; W. F. Albright, The Archæology of Palestine and the Bible; Barton, Archæology and the Bible; G. A. Smith, Historical Geography; Olmstead, History of Syria and Palestine; Peritz, Old Testament History; Adolph Lods, Israel; Breasted, Egypt, A History of the Ancient World; Wells, H. G., An Outline of History; Wooley, Abraham, Ur of the Chaldees, The Development of Sumerian Art; McAllister, A Century of Excavations in Palestine. Two hours.
- 8. The History and Archaeology of Israel and Judah from the Time of the Early Monarchy to the Maccabean Period. Bailey and Kent, History of the Hebrew Commonwealth; Barton, Smith, Olmstead, Oesterley and Robinson, Albright, Lods. Two hours.
- 9. Hebrew, Prophetic and Poetic. (a) Micah, chapters 1, 2, 3, 6, 7; Habakkuk, chapters 1, 2, 3. (b) Jeremiah, chapters 4, 26, 31: Isaiah 58, 61; Psalm 51. Two hours.

- 10. Hebrew, Prophetic, Wisdom, Apocalyptic and Poetic. (a) Zechariah, chapter 2; Psalms 48, 50, 93, 101, 120, 124, 126, 130; Song of Solomon, chapters 2, 3; Proverbs, chapters 22, 25; Ecclesiastes, chapters 10-11; Daniel, chapters 1, 8, 12. Two hours.
- 11, 12. OLD TESTAMENT, INTRODUCTION, CRITICISM, RELIGION. (a) Firts Term: The Pentateuch, Former and Latter Prophets; Synopsis of The Religion of Israel, Professor W. G. Jordan, Peake's Commentary; Gray; Bennett and Adeney; Driver; Chapman; Oesterley and Robinson, An Introduction to the Books of the Old Testament. (b) Second Term: The Writings: Synopsis of Cornill, The Prophets of Israel; Geden, Introduction to the Hebrew Bible; Kenyon, Our Bible and the Ancient Manuscripts; S. Paterson Smyth, How We Got Our Bible. Two hours.
- 13, 14. Religion of Israel. (a) First Term: H. P. Smith, Hebrew Religion; Oesterley and Robinson; Synopsis of Introduction to the Pentateuch, Carpenter, Peake's Commentary. (b) Second Term: H. P. Smith, Oesterley and Robinson, Synopsis of Canon and Text of the Old Testament, Skinner, and the Development of Old Testament Literature, Peake, Peake's Commentary. Two hours (1938-39.)

Note—Essays and synopses are to be handed in to the Registrar on or before December 1st in case of First Term Courses. In connection with courses 5, 6, 9, 10, syntactical principles are to be mastered, use being made of the syntax of either A. B. Davidson or Harper. For interpretation, the Century, Cambridge, Expositor's or Peake's Bible Commentaries may be used. In connection with courses 7, 8, 11, 12, the English Bible (revised version) or that of the Jewish Publication Society should be used.

HELLENISTIC GREEK

Instruction in Hellenistic Greek is provided only in the affiliated Colleges.

HELLENISTIC GREEK IA—Courses 1, 2.

HELLENISTIC GREEK II—Courses 3, 4. (Prerequisite, Hellenistic Greek IA or Classical Greek I.)

HELLENISTIC GREEK III—Courses 5, 6. (Prerequisite, Hellenistic Greek II.)

HELLENISTIC GREEK IV—Courses 7, 8. (Prerequisite, Hellenistic Greek II or III).

HELLENISTIC GREEK V—Courses 9, 10. (Prerequisite, Hellenistic Greek III or IV).

Hellenistic Greek III and IV are offered in alternate years. Hellenistic Greek IV will be offered in 1937-38.

N.B.—For key to system of numbering courses, see page 5.

1, 2. Huddilston's Essentials of New Testament Greek will be covered. First term: Lessons I-XX. Second term: Lessons XXI-XXXII, with a reading of the Selections for Translation. Four hours a week.

- 3. (a) The Gospel According to St. John, Chapters I-V, and the Gospel According to St. Mark, Chapters I-V. Text: Nestle's Greek Testament. Three hours a week. (b) A literary introduction to these two Gospels and a study of their style and language; along with a thorough review of the grammar. One hour a week.
- 4. (a) The Gospel According to St. Matthew (Chapters I, II, V-VII, X, XIII, XXII), and the Gospel According to St. Luke (Chapters II, IV, VI, X-XII, XIV-XVI. Text: Nestle's Greek Testament or Huck-Litzmann, A Synopsis of the First Three Gospels (English Edition). Three hours a week. (b) A literary introduction to these two Gospels, a study of their style and language, and a survey of the Synoptic Problem; along with a study of the main points of New Testament Greek syntax, with exercises in composition based on the required reading. One hour a week.
- 5. (a) The Acts of the Apostles, Chapters I-VI, XIII-XXIV. Three hours a week. (b) A literary introduction to the book of Acts and a study of its style and language; along with a study of Early Christianity, its foundation and development, the various phases of early Christian thought, and the life and work of Paul. One hour a week. (1938-39.)
- 6. (a) Romans (Chapters I-XI); I Corinthians; Ecclesiasticus (Chapters I-VIII). Three hours a week. (b) A literary introduction to these three books and a study of their style and language; along with a study of the Hellenistic setting of Early Christianity, the cultural, social, economic, and religious environmental forces which operated in its rise. One hour a week. (1938-39.)
- 7. (a) II Corinthians and Galatians. Three hours a week. (b) A literary introduction to these two books and a study of their style and language; along with a survey of the history of the Intertestamental and New Testament Periods and of the development and characteristics of Palestinian Judaism. One hour a week. (1937-38.)
- 8. (a) Ephesians; Philippians; Colossians; I and II Thessalonians; Philemon; II and III John; I Maccabees (Chapters I-X). Three hours a week. (b) A literary introduction to these books and a study of their style and language; along with a survey of the books of the Apocrypha, and a study of the Apocalyptic movement and of the literature which it produced. One hour a week. (1937-38.)
- 9. (a) Hebrews and James. Three hours a week. (b) A literary introduction to these two books and a study of their style and language; along with a survey of the origin and value of the Septuagint and a study of the textual criticism of the New Testament and of the chief manuscripts and versions. One hour a week.
- 10. (a) I and II Timothy; Titus; I and II Peter; Jude; the Revelation of John (Chapters I, VII, XII-XIII, XVII-XXII); the Wisdom of Solomon (Chapters I-IX). Three hours a week. (b) A literary introduction to these books and a study of their style and language; along with a study of Hellenistic Judaism, its rise, characteristics, and chief literary figures. One hour a week.

Note.—In Hellenistic Greek II, III and IV, student will be expected to make constant reference to Burton's New Testament Moods and Tenses and Moulton's or Robertson's larger grammars.

ICELANDIC

ICELANDIC I—Courses 1, 2; 3, 4. (Prerequisite, Matriculation Icelandic.)

ICELANDIC II—Courses 5, 6, 7, 8. (Prerequisite, Icelandic I.)

N.B.—For key to system of numbering courses, see page 5.

- 1, 2. Grammar. An Elementary Grammar of Old Icelandic (H. M. Buckhurst, Methuen & Co.) (a) First Term: Chapters 1 to 3; (b) Second Term: Chapters 4 to 9. One hour a week. (Not offered in 1937-1938.)
- 3. Authors. (a) Easy Readings in Old Icelandic (W. A. Craigie, I. B. Hutchen, Edinburgh); Selections 1-30. (b) Edda and Saga (B. S. Phillpotts, Home University Library), chapters 7 and 8. Three hours a week. (Not offered in 1937-1938.)
- 4. AUTHORS. (a) Easy Readings, selections 31-60. (b) Edda and Saga, chapters 9 and 10. (c) Islendinga Pættir (P. Jónsson, Rvík, 1904): Ivars þáttr, Þórarins þáttr, Þorleifs þáttr. Three hours a week. (Not offered in 1937-1938.)
- 5, 6. Authors. With grammar in conjunction. (a) Gunnlaugs Saga Ormstungu. (b) Saemundar Edda (F. Jónsson), pp. 87-107. Four hours a week. (Not offered in 1937-1938.)
- 7, 8. Authors. With grammar in conjunction. (a) Saemundar Edda (F. Jónsson), pp. 1-58, 137-160, 169-173. (b) Edda and Saga (B. S. Phillpotts), Home University Library, completed. Four hours a week. (Not offered in 1937-1938.)

NORSE—(NORWEGIAN)

NOTICE—Instruction in Norse is provided only in St. John's College.

Norse I-Courses 1, 2.

Norse II—Courses 3, 4. (Prerequisite, Norse I).

N.B.—For key to system of numbering courses, see page 5.

- 1, 2. Beginning Norwegian, Einar Haugen, Burgess Publishing Company, Minneapolis. *First Term*: Lessons I-X incl. *Second Term*: Lessons XI-XVIII incl. and Bjørnson, Synnøve Solbakken, edited by Geo. T. Flom, Free Church Publishing Company, Minneapolis. Four hours a week.
- 3, 4. First Term: Norsk Lesebok III, Free Church Publishing Company, Minneapolis. Second Term: Henrick Ibsen, Kongsemnerne, edited by J. A. Holvik & P. J. Eikeland, Augsburg Publishing Company, Minneapolis. Four hours a week.

RELIGIOUS EDUCATION

Notice—Instruction in Religious Education is provided only in the affiliated Colleges.

Religious Education (Psychology and Methods)—Courses 1, 2. Religious Education (History and Principles)—Courses 3, 4.

N.B.—For key to system of numbering courses, see page 5.

- 1. The Psychology of Religious Education. This course is a study of the psychological principles underlying the religious life of childhood and adolescence, and a survey of the leading facts concerning morals, manners, and religion of childhood and youth. Four hours a week. Texts: Norsworthy and Whitley, Psychology of Childhood; Tracy, Psychology of Adolescence; or, Kelly, Educational Psychology. (Supplementary Reading: Horne, The Psychological Principles of Education.)
- 2. Curricula and Teacher Training. This course deals with the history of the curriculum; the principles of determining the selection of materials; the methods of grading and organizing materials; the principles involved in the teaching process; present tendencies in teacher training; and examination of current curricula. Four hours a week. Texts: Betts, The Curriculum of Religious Education; Betts and Hawthorne, Method in Teaching Religion; Bower, The Curriculum of Religious Education; or, Sharp, Aims and Methods in Teaching Religion; McMahon, Some Methods in Teaching Religion.
- 3. The History of Education. This course gives a survey of the development of educational practice and theory beginning with the Hebrew and extending to our own times; the lives and ideals of the great educational reformers; the great catechisms; the beginnings of the Sunday School movement; modern movements in religious education. Four hours a week. Texts: Cubberley, A Brief History of Education; Brown, A History of Education in Recent Times; or, McCormick, A History of Education.
- 4. PHILOSOPHY AND PRINCIPLES. This course deals with the fundamental presuppositions and principles of religious education; psychological and social factors conditioning religious growth and development; functions of family, church and state in Religious Education. Four hours a week. Texts: Demiashkevich, An Introduction to the Philosophy of Education; Soares, The Principles of Religious Education; or, Shields, Philosophy of Education.

PHILOSOPHIE LATINE LATIN PHILOSOPHY

N.B.—Pour l'interpretation des chiffres designant les cours, voir la clef, page 5.

TROISIÈME ET QUATRIÈME ANNÉES

1937-1938 et tous les deux ans alternativement

1, 2. Philosophia Scholastica. Premier terme, First term: Ontologia, Cosmologia. Second terme, Second term: Psychologia.

Six heures par semaine. Six hours a week. Auteur, Text: A. Lortie, Elementa Philosophiae Christianae, Tomi I et II (Action Sociale, Québec, 1929).

Références: A. Eymieu, Le Gouvernement de soi-même, vol. I (Perrin, Paris, 1928), Cardinal Mercier, Psychologie, vol. I (Louvain, 1923), H. de Tourville, Précis de Psychologie fondamentale (Bloud, Paris, 1928), C. Lahr, Manuel de Philosophie (Beauchesne, Paris, 1924).

- 3, 4. Education Religieuse. L. Riboulet, Histoire de la Pédagogie (Vitte, Paris). Une heure par semaine.
- 5, 6. HISTOIRE DE LA PHILOSOPHIE. D. Barbedette, Histoire de la Philosophie (Berche, Paris, 1929) pages 1-336. Premier terme: Philosophie orientale, grecque, gréco-romano-orientale, patristique. Second terme: Philosophie byzantine, arabe, juice, scolastique. Une heure par semaine.
- 7, 8. Physique. Premier terme: Notions de Mécanique, Hydrostatique, Pesanteur, Chaleur. Second terme: Acoustique. Optique, Electricité et Magnétisme. Quatre heures par semaine. Auteur: Leday, Manuel de Physique.
- 9, 10. Physique Experimentale. Les élèves font une série d'expériences dans le but d'illustrer les principes étudiés pendant les cours. Deux heures par semaine. Auteur: Noble, Manipulations physiques.
 - 11, 12. BOTANIQUE. Dalbis, Anatomie et physiologie végétales.
- 13, 14. Laboratoire, Botanique Generale. Deux heures par semaine. Dalbis, Exercices pratiques de Botanique.
- 15. Astronomie. La terre et ses mouvements, le soleil, la lune, les planètes, les comètes, les étoiles, les nébuleuses, coordonnées, célestes, hypothèses cosmogoniques. Deux heures par semaine. Auteur: Moreaux, Cosmographie.

1938-1939 et tous les deux ans alternativement.

1, 2. Philosophia Scholastica. Premier terme, First term: Logica, Moralis la pars. Second terme, Second term: Moralis 2a et 3a pars, Theodicea. Six heures par semaine. Six hours a week. Auteur, Text: A. Lortie, Elementa Philosophiae Christianae, Tomus III, (Action Sociale, Québec, 1929).

Références: Gilson, Le Thomisme, vol. I (Vrin, Paris, 1927), A. D. Sertillanges, S. Thomas, vol. II (Alcan, Paris, 1935), Cardinal Mercier, Traité Elémentaire de Philosophie, vol. II (Louvain, 1926), S. Gillet, La morale et les morales, vol. I (Desclée, Paris, 1925), A. Valensin, Traité de droit naturel, vol. II (Spes, Paris, 1925).

- 3, 4. Education Religieuse. L. Riboulet, Psychologie appliquée a l'Éducation (Vitte, Paris). Une heure par semaine.
- 5, 6. HISTOIRE DE LA PHILOSOPHIE. D. Barbedette, Histoire de la Philosophie (Berche, Paris, 1929), pages 336-573. Premier terme: Philosophie moderne, 17e siècle. Second terme: 18e et 19e siècles. Une heure par semaine.
- 7, 8. CHIMIE. Principes élémentaires: éléments et composés; lois des combinaisons; atomes et molécules; acides, bases, sels; pro-

priétés des éléments les plus connus et de leurs principaux composés; principes de l'analyse chimique des sels; introduction à la chimie organique. Quatre heures par semaine. Auteur: Bazin, Chimie Générale.

- 9. 10. Manipulations Chimiques. Expériences illustrant les principes étudiés pendant les cours. Trois heures par semaine.
- 11. ZOOLOGIE. Dalbis, Anatomie et Physiologie animales. Deux heures par semaine.
- 12. Manipulations Biologiques. Série d'expériences illustrant la théorie avec une introduction aux méthodes zoologiques. Deux heures par semaine. Auteur: Chaine.
- 13. Anatomie et Physiologie Humaines. Squelette, Os, Tissus, Respiration, Nutrition, Digestion, Circulation, Excrétion, Système nerveux et Organes des sens. Deux heures par semaine.

DEUXIÈME ANNÉE

(Tous les sujets sont obligatoires; il n'y a pas de sujets facultatifs.)
Français

Composition et Préceptes Littéraires.—Rédaction au cours de chaque terme de quatre compositions formant un total minimum de 2,000 mots.

Préceptes—premier terme. L'art dramatique; historique du drame; la tragédie grecque, son évolution; la tragédie cornélienne; le système dramatique de Shakespeare; les prétentions du théâtre de Voltaire; la conception romantique d'après Hernani et Ruy Blas; le drame moderne; Bornier, Le Fille de Roland; Rostand L'Aiglon; Coppée, Pour la Couronne; le renouveau du théâtre chrétien; Ghéon, Les Trois Sagesses du vieux Wang.

Manuels et livres de références. Verest, Manuel de littérature; Faguet, Drame ancien, drame moderne; Lemaître, Impressions de théâtre; Brunetière; Les Epoques du théâtre français. Notes du professeur.

Préceptes—deuxième terme. L'éloquence. Formation de l'orateur; dialectique oratoire; pathétiques et traité des passions: tempéraments oratoires; structure du discours; la débit, diction et action; l'âme dans la voix et dans le geste; étude de l'appareil expressif; genres oratoires; éloquence sacrée; éloquence profane, poltique, judiciaire, d'apparat.

Manuels et livres de références. Longhaye, Théorie des Belles-Lettres; Verest, Manuel de littérature; Legouvé, La lecture en action; Damien, Le geste Dion, Poétique et Rhétorique, L'art de parler; Monsabré, La prédication.

HISTOIRE DE LA LITTERATURE ET AUTEURS FRANÇAIS. Premier terme. Bourdaloue, Bossuet, Massillon, Diderot, Beaumarchais, Lesage, Montesquieu, Buffon, Jean-Jacques Rousseau, Joseph de Maistre, Voltaire, Madame de Staël, Chateaubriand. Extraits et analyses des auteurs ci-devant mentionnés.

Deuxième terme. Le mouvement romantique: Hugo, Musset, George Sand, Stendhal, Balzac, Michelet. Le Naturalisme: Leconte de Lisle, Sully Prud'homme, Coppée, Dumas (fils), Flaubert, Taine, Sainte-Beuve, Veuillot, Verlaine, Mallarmé. Les Contemporains: Brunetière, France, Faguet, Bourget, de Voguë, Lemaître, Barrès, Bordeaux, Bazin, Benjamin, Brieux. Extraits et analyses des auteurs ci-devant mentionnés.

Manuels et livres de références: Faivre, Histoire de la littérature et analyse des auteurs; Mouchard, Histoire de la littérature; Lanson, Histoire de la littérature; Calvet, Histoire illustrée de la littérature; Desgranges, Histoire illustrée de la littérature; Strowski, Tableau de la littérature française au VIVe siècle; Doumic, Tableau de la littérature. Procès, tomes II, III, IV, Morceaux, choisis; Calvet, Morceaux choisis; Desgranges, Auteurs français; Vianey, Explication française' Voltaire, Oeuvres choisies (Flandrin); Montesquieu, Oeuvres choisies (Roustan); Rousseau, Oeuvres choisies (Marnet); Balzac, Oeuvres choisies (Merlant); Chateaubriand, Oeuvres choisies (Florisoone).

Lectures: Outre les ouvrages déjà mentionnés les élèves devront lire les livres suivants, et en rédiger une appréciation: Baumann, Bossuet; Souvestre, Un philosophe sous les toits; Valsayre, O'Connell, Lecigne, Joseph de Maistre, Louis Veuillot; Musset, Fantasio; Rostand, Cyrano de Bergerae, l'Aiglon; Bazin, La Barrière; Bordeux, La peur de vivre; Barrès, Colette Baudoche.

Latin

THEME LATINS ET VERSIONS. Mouchard, Thèmes latins. Aussi, thèmes rédigés d'après les auteurs latins au programme. Ragon, Centvingt versions latines.

AUTEURS. Premier terme—Cicéron, Pro Murena; Horace, Epitres. Second terme—Cicéron, Pro Lege Manilia; Horace, Satires.

Grec

Grammaire et Themes Grecs. Revue de la morphologie et de la syntaxe. Ragon, Thèmes sur la syntaxe. Thèmes rédigés d'après les auteurs grecs au programme. Ragon, Deux cent versions grecques.

1937-1938 et tous les deux ans alternativement.

Auteurs. Premier terme—Platon, Phédon; Homère, Iliade, chant, I, 1e partie. Second terme—Démosthène, 1ere Philippique, Iliade, chant I, 2e partie.

1938-1939 et tous les deux ans alternativement.

AUTEURS. Premier terme—Platon, Apologie de Socrate; Sophocle, Oedipe-Roi, 1ere partie. Second terme—Démosthène. 3e Philippique; Sophocle, Oedipe-Rai, 2e partie.

Anglais

1937-1938 et tous les deux ans alternativement.

Prose and Composition. First Term—Memory work, exercises in vocabulary, translation. Text: Gibb-Roulier-Stryienski, Cours de thèmes anglais (Didier). Qualities of style, processes of composition. Text: Model English II, Donnelly (Allyn & Bacon).

Second Term—Memory work, exercises in vocabulary and pronunciation, exercises in translation. Text: Gibb-Roulier-Stryienski, Cours de thèmes anglais (Didier). Aids to composition, types of composition. Text: Donnelly, Model English II.

HISTORY OF LITERATURE. First Term—The Nineteenth Century; The Age of Romanticism; The Victorian Period; Keats, Shelley, Byron, Coleridge, Scott, Lamb, Southey, Wordsworth, Moore, Mrs. Browning, Rossetti, Browning, Lingard, De Quincey, Faber.

Second Term—Thackeray, Wiseman, Dickens, Eliot, Carlyle, Arnold, Tennyson, Patmore, Francis Thompson, Swinburne, Newman, Manning, Stevenson, Ruskin, Meredith, Hardy, Barrie, Chesterton, Kipling; also Franklin, Poe, Bryant, Longfellow, Whittier, Cooper, Webster, Irving, Hawthorne, Holmes. Text: English Literature, Brother Leo (Ginn & Co.). References: Long, English Literature; Legouis and Cazamian, A History of English Literature.

Selections from Authors. First Term—Keats: Ode on a Grecian Urn, To Autumn; Shelley; The Cloud; Byron: Apostrophe to the Ocean, Saint Peter at Rome; Coleridge: Selections from the Ancient Marines and Kubla Khan; Scott: Ivanhoe; Lamb: Tales from Shakespeare; Southey: The Inchcape Rock. Selections from other authors studied. *Detailed study* of poems from Wordsworth and Tennyson in Greater English Poets, Crawford, Perry and Woodhouse.

Second Term—Wiseman: Fabiola; Dickens: Oliver Twist; Tennyson: Crossing the Bar, The Bugle Song, Next of Kin, The Summer Is Ended; Patmore: The Toys; Thompson; Ex Ore Infantium, Daisy; Newman: Selections; Stevenson: Treasure Island, Dr. Jekyll and Mr. Hyde; Poe: The Haunted Palace, The Raven; Longfellow: The Psalm of Life; Cooper: The Last of the Mohicans; Irving: The Sketch Book. Detailed study of the following: Dickens, David Copperfield (Gigord, Paris); Newman, Prose and Poetry (Allyn & Bacon). Text of Selections: Greater English Poets; Modern English Prose, Carpenter and Brewster (Macmillan).

N.B.—Tout l'enseignement se donne dans la langue anglaise et les élèves sont tenus de ne se servir que de cette langue en classe. Une importance primordiale est attachée à l'accentuation et à la pureté de la prononciation dans les lectures à haute voix et les répétitions.

1938-1939 et tous les deux ans alternativement.

PROSE AND COMPOSITION. First Term—Memory work, exercises in vocabulary, pronunciation and translation. Text: Gibb-Roulier-Stryienski, Cours de thèmes anglais (Paris, Didier, 1928). The sentence, the paragraph, narration, precepts, imitation work and analysis of models. Text: Model English I, Donnelly (Allyn & Bacon). Second Term—Description and essay; precepts, imitation and analysis of models, Donnelly, pp. 123-189.

HISTORY OF LITERATURE. First Term—Early English Period, Elizabethan Literature, Civil War Period; Chaucer, More, Spenser, Southwell, Shakespeare, Jonson, Milton, Dryden, Bunyan. Second Term—Eighteenth Century Literature. I.—The Period of Classicists; Pope, Swift, Addison, Steele, Johnson, Burke, Gibbon. II—The

Romantic Movement; James Thomson, Collins, Young, Gray, Goldsmith, Burns, Cowper. III—The First English Novelist; History of the Novel, Defoe. Text: English Literature, Brother Leo (Ginn & Co.). References: Long, English Literature (Ginn & Co.); Legouis and Cazamian, A History of English Literature (Macmillan); Jenkins, Handbook of Literature (John Murphy, New York).

Selections from Authors. First Term—Spenser: Extracts from the Faerie Queene. Sonnet XXVI, LXXIX. Southwest: Dangers of Delay; Times Go By Turns; Scorn Not the Least; The Burning Babe. Shakespeare: Richard III, Act I, Scene IV; King John, Act IV, Scene I; Henry VII, Act III, Scene II, and Act IV, Scene IV, Scene II. Milton: Extracts from Paradise Lost; Debate in Pandemonium, Address to Light, Satan's Soliloquy on Viewing Paradise at a Distance; Ode, On the Morning of Christ's Nativity. Dryden: Alexander's Feast. Selections from other authors studied. Detailed study of the following: Shakespeare, Macbeth; Macaulay, Essay on Addison (Allyn & Bacon).

Second Term—Pope: Ode on Solitude; Extracts from Essay on Criticism. Thomson: Winter, Castle of Indolence, Ode to Evening. Gray: Elegy Written in a Country Churchyard. Cowper: On the Receipt of My Mother's Picture. Steele: Story-Telling. Swift: Verses on His Own Death. Selections from other authors studied. Detailed study of the following: Select Essays (Allyn & Bacon); Text of poetic selections: Greater English Poets, Crawford, Perry and Woodhouse (Macmillan).

Histoire

1937-1938 et tous les deux ans alternativement

HISTOIRE DU CANADA. Premier terme—Découverte de l'Amé rique; domination française. Second terme—Domination anglaise; histoire politique, militaire et religeuse.

Manuels et livres de références: Rutché et Forget, Précis d'histoire du Canada; Desrosiers et Bertrand, Histoire du Canada; Hopkins, Histoire populaire du Canada (traduction de Benjamin Sulte); Ferland, Histoire du Canada; Groulx, La Naissance d'une race, Lendemain de conquête; Vers l'Emancipatipn; Chapais, Cours d'histoire du Canada (3 vols.); Collections, "The Makes of Canada," "Canada and its Provinces."

1938-1939 et tous les deux ans alternativement.

HISTOIRE CONTEMPORAINE (1789 à nos jours):

Premier terme—La Révolution française; le Consulat et l'Empire; la Restauration; la Monarchie de Juillet; La République de 1848.

Deuxième terme—Le Second Empire; la Troisième République; l'Europe après 1870; l'Europe de 1900 à nos jours; la Guerre Européenne.

Manuels et livres de références: Jules Uny, l'Epoque contemporaine; de la Gorce, Histoire religieuse de la Révolution Française; Vandal, l'Avènement de Bonaparte; A Mallet, XIXème siècle; Jacques Bainville, Histoire de France; de la Gorce, Histoire du

Second Empire; Louis Madelin, La France de l'Empire; R. Poincaré, La Guerre de 1914; G. Mangin, Comment finit la guerre; G. Hanotaux, La Troisième République.

Mathématiques

1937-1938 et tous les deux ans alternativement

Wilson and Warren, College Algebra; Crawley and Evans, Analytical Geometry. Voir cours 1, 2, 3, 4; page 77.

1938-1939 et tous les deux ans alternativement. Plane Trigonometry; Hall and Knight, voir cours, 5, 6; page 77.

PREMIÈRE ANNÉE

(Tous les sujets sont obligatoires; il n'y a pas de sujets facultatifs.)

Français

Composition et Preceptes Litteraires. Redaction au cours de chaque terme de quatre compositions formant un total minimum de 2000 mots.

Préceptes—Premier terme. L'art de la composition; l'invention; la stérilité littéraire; les topiques; la disposition; notions d'ordre et de choix; la description; genéralités; observation directe et indirecte, sa place dans une oeuvre; modèles; Homère, Châteaubriand, Lafontaine, Hugo, Flaubert, La Bruyère; La narration; géneralité; genres, vraisemblance dans l'ensemble et dans le détail; l'are de la narration chez Lafontaine, so supériorité sur Esope et Phèdre; La verité des caractères; grandes lois; procédés des grands maîtres. Etude des narrations suivantes; Daudet, Le mauvais zouave, L'enfant espion; La chèvre de Monsieur Séguin, Les petits pâtés, Bazin, Le départ d'André Lumineau (La terre qui meurt); Feuillet, La Barque (Histoire de Sibylle); Voltaire, L'art de se choisir un ministre (Zadig); Mme. J. Lavergne, Pierrot fugitif. La dissertation; étude d'un extrait de L-Veuillot dans Ça et là. La critique; l'évolution de la critique littéraire; le bon goût; les classiques; règles pratiques de critique littéraire. Notion de psychologie littéraire; analyse des facultés mentales, de l'émotion esthétique; le rire. La parole et le livre

Manuels et livres de références: Verest, Manuel de littérature; Longhaye, Théorie des Belles-Lettres; Vincent. Théorie de la composition littéraire; Lanson, Conseils sur l'art d'écrire; Albalat, L'art d'écrire en 20 leçons, Le travail du style, La formation du style; Roustan, La narration. Notes du professeur.

Prèceptes—Deuxième terme: Les genres littéraires et leur évolution: la lettre; analyse des modèles—Veuillot, de Maistre, Mme. de Sévigné; genre didactique; littérature scientifique et historique Notion d'esthétique; les Beaux arts; la poésie et son objet; poésie épique; le roman; poésie lyrique; les âges lyriques; l'ode et l'élégie moderne avec Chénier, Hugo, Lamartine, Musset, Vigny.

Manuels et livres références: Verest, Manuel de littérature; Longhaye, Théorie des Belles-Lettres; Lacouture, L'esthétique fondamentale; Vincent, Les genres littéraires; Lammenais, De l'art et du beau. HISTOIRE DE LA LITTERATURE ET AUTEURS FRANÇAIS. Premier terme —Origine et premiers développements de la langue française; le Moyen âge; chansons de geste, la Chanson de Roland; romans allégoriques; fabliaux; poésie dramatique; poésie lyrique; l'histoire, Villehardouin, Joinville, Froissart, Commines; la Renaissance, Marot, Ronsard et la Pléiade, du Bellay; le théàtre: Jodelle et Garnier; Rabelais, Saint François de Sales, Montaigne; la Satire Ménipée; Régnier et Malherbe. Extraits et analyses des auteurs ci-devant mentionnés.

Deuxième terme—Le XVIIe siècle: D'Urfé, L'Hôtel de Rambouillet, L'Académie française, Port-Royal, Descartes, Balzac, Voiture, Madeleine de Scudéry, Rotrou, Corneille, Racine, Molière, La Fontaine, Boileau, Pascal, La Rochefoucauld, La Bruyère, Fénelon; la querelle des Anciens, et des Modernes. Extraits et analyses des auteurs ci-devant mentionnés.

Manuels et livres de références: Faivre Histoire de la littérature et analyses des auteurs; Mouchard, Histoire de la littérature; Lanson, Histoire de la littérature; Des Granges, Histoire illustrée de la littérature; Valvet, Histoire de la littérature; Parvillez et Moncarey, La littérature française; Faguet, XVIe siècle choisis, tome III; Des Granges, La littérature française (Analyses); Morceaux choisis: Oeuvres choisies de Corneille (Rocheblave); Oeuvres choisies de Racine (Fourcassié); Oeuvres choisies de Molière (Des Granges); Oeuvres choisies de la Bruyère (Cayrou); Oeuvres choisies de La Fontaine (Le Bidois); Oeuvres choisies de Boileau (Géruzez).

N.B.—Les élèves devront, en plus des extraits et pièces analysés en classe, lire les grandes pièces classique du XVIIe siècle et en rédiger une appréciation.

Latin

Grammaire et Themes Latins. Revue générale de la grammaire latine. Ragon, Exercices latins sur la syntax. Mouchard, Thèmes rédigés d'après les auteurs latins au programme. Ragon cent vingt versions latins.

AUTEUR. Premiere terme—Cicéron, Pro Archia; Virgile, Enéide, chante VIe, première moitié. Second terme—Virgile, Enéide, Chant VIe seconde moitié; Cicéron, De Senectute; Horace, Odes choisies.

Grec

(Voir le programme de la deuxième année.)

Anglais

(Voir le programme de la deuxième année.)

Histoire

(Voir le programme de la deuxième année.)

Mathématiques

(Voir le programme de la deuxième année.)

CURRICULA IN PHARMACY

DIPLOMA IN PHARMACY

The University of Manitoba entered into an arrangement with the Pharmaceutical Association of Manitoba in 1914 whereby the work of instruction in Pharmacy of students desiring to qualify as licensed Pharmaceutical Chemists in Manitoba (formerly carried on by the Association in its own College, known as the Manitoba College of Pharmacy) was undertaken by the University. The Association continues to prescribe the preliminary educational qualifications, the conditions of apprenticeship and practical training, admission fees, etc., and issues the license, the University being responsible only for the work of instruction and examination. Similarly, the Association determines the value of all professional certificates or other like credentials from other associations or institutions, and reports to the University the credit to be given in the course for the Diploma in Pharmacy. An applicant for registration as a Certified Apprentice shall produce evidence that he has passed the Matriculation Examination for Arts and Science of the University of Manitoba or an examination reasonably equivalent thereto clear of all conditions. Intending students must have the period of apprenticeship verified on special forms obtainable on request from the Registrar of the Pharmaceutical Association, and these certificates are to be returned to him not later than August 15th of the year in which the student intends to enter the University course in Pharmacy. A certificate from the Registrar of the Pharmaceutical Association to the effect that the Association's requirements with respect to preliminary education, apprenticeship, etc., have been met must be presented to the Registrar of the University at the time of registration or in advance.

The course covers two academic years, as follows:

First Year

| | That Ital | | | | |
|--|--|----------------------------------|------------------------------|---|--------------------------------|
| Course Nos. Pag 1, 2; 3, 4 55 1, 2; 5, 6 117 7, 8; 9, 10 117 11, 12 117 13, 14 118 3, 4 117 1, 2; 3, 4 51-52 | e SUBJECT Chemistry . Pharmacy Materia Medica Prescriptions Physiology Dispensing Theory Botany | Lecture hours per week 5 2 1 1 2 | Term Lab. hours per week 3 6 | Spring Lecture hours per week 3 1 1 1 2 2 | Term Lab. hours per week 3 6 1 |
| | Second Year | | | | |
| 17, 18 118 19, 20 118 21, 22 118 23, 24 118 | Pharmaceutical Chemistry—Inorganic Pharmaceutical Chemistry—Organic Practical Pharmaceutical Chemistry Materia Medica Biologics Physics | 3 2 1 | 9 - 2 | 3 3 2 1 3 | - 9 - - 2 |

Owing to the limited laboratory space available for the work of the Department of Pharmacy, it will be necessary to restrict the registration in the First Year of the Diploma Course for the session 1937-1938 to at most twenty-four students. Applications will be received up to August 1st and should be on a form provided by the Registrar of the University, obtainable on request.

The following excerpts from the "Manitoba Pharmaceutical Act" touching the matters of preliminary educational qualification, conditions of apprenticeship, etc., are appended:

THE PHARMACEUTICAL ACT

Statutes of Manitoba, Consolidated Amendments, 1924, Cap. 153.

- 16. (1) Before a candidate shall be eligible to be registered as a certified apprentice he shall:
 - (a) produce to the council satisfactory evidence of good moral character;
- (b) pass such examinations as the council prescribes, or produce to the council satisfactory evidence of requisite knowledge.
- (2) No person shall be competent to be registered as a certified apprentice unless he has attained the age of at least sixteen years.
- 17. (1) Before a candidate shall be entitled to be registered as a licentiate pharmaceutical chemist he shall:
- (a) produce to the council the prescribed contract of service and satisfactory evidence that he has served at least four years as a certified apprentice to a licensed pharmaceutical chemist who has been, during that period, in actual practice as a compounder of physicians' prescriptions, and that he has attended such course of instruction as the council prescribes; time spent in attendance at a regular course of lectures and instruction in a college or school of pharmacy recognized and approved by the council shall be considered part of the period of service to the extent determined by by-law of the council;
- (b) pass such examination as the council prescribes, or produce to it other satisfactory evidence of requisite knowledge and experience; and
- (c) make his application for registration within six years from his registration as a certified apprentice, unless the time be extended by the council.
- (2) No person shall be registered as a pharmaceutical chemist who is not a British subject and who has not attained the age of twenty-one years.
- 18. The council may in its discretion accept the diploma or other authenticated certificate of examination of any other competent examining board outside the province, or of the Department of Education of Manitoba, as sufficient evidence of the qualification of an applicant to be registered as a certified apprentice; and it may accept the diploma or other authenticated certificates of examination of any other competent examining board outside the province, or of the University of Manitoba, as sufficient evidence of the qualification of an applicant to be registered as a pharmaceutical chemist.

DEGREE IN PHARMACY

BACHELOR OF SCIENCE IN PHARMACY

The University of Manitoba confers the degree of Bachelor of Science in Pharmacy. The following are the requisites for proceeding in course to this degree.

Matriculation

The requirements for Matriculation are the same as for Matriculation for Arts or Science.

First Year

| Course Nos. Page 1, 2 65 1, 2; 3, 4 82 1, 2; 3, 4, 91 1, 2; 3, 4 55 1, 2; 3, 4 70 1, 2, or 3, 4 75-76 | English Mathematics Physics Chemistry French or German | 6 3 2 3 | Term Lab. hours per week | Spring T Lecture hours per week 4 6 3 2 3 | Term Lab. hours per week |
|--|--|------------------|--------------------------------------|--|--------------------------------------|
| | Second Year | * | | | |
| | Second Tear | | | | |
| 15, 16; 11, 12 55 | Chemistry | 2 | 6 | 2 | 6 |
| 1, 2; 3, 4 51-52 | Botany | | 2 | 2 | 2 |
| 1, 2; 5, 6 117 | Pharmacy | | 6 | 3 | 6 |
| 7, 8; 9, 10 117 | Materia Medica | | | 1 | 1 |
| | Prescriptions | 1 | -1 | 1 | - |
| 3, 4 117 13, 14 117 | Dispensing Theory | 1 | - | 2 | |
| 13, 14 117 | Physiology | 1 | 0 | 1 | 0 |
| | Third Year* | | | | |
| | Gla Internal | 0 | | 0 | 9 |
| 21, 22; 23, 24 56 5, 6 97 | Chemistry Zoology | | 3 | 2 3 | 3 |
| 5, 6 97 15, 16 118 | Pharm, Chem. Inorganic | | 9 | 3 | 3 |
| 17, 18 118 | Pharm. Chem. Organic | | 0 | - 3 | |
| 19. 20 118 | Pract. Pharm, Chem. | | 9 | | 9 |
| 21, 22 118 | Materia Medica | | | 2 | - |
| 23, 24 118 | Biologics | 1 | - | 1 | - |
| | Frank Vos | | | | |
| | Fourth Year | | | | |
| 25. 26: 27. 28. 118 | Pharmaceut. Chemistry | 2 | 6 | 2 | 6 |
| 29, 30; 31, 32 118 | Phytochemistry | | 6 | 2 | 6 |
| 31, 32; 39, 40 56 | Chemistry | 2 | 6 | 2 | 6 |
| | | | | | |

^{*}The same periods of apprenticeship, certified to by the Registrar of the Manitoba Pharmaceutical Association, are required for admission to the Second and Third Years of this course as are required for admission to the First and Second Years respectively of the Diploma Course. This requirement is imposed in conformity with the Pharmaceutical Association Act. (See page 115).

COURSES IN PHARMACY IN DETAIL

DEPARTMENT OF PHARMACY AND PHARMACEUTICAL CHEMISTRY

Henry E. Bletcher, B.Sc., F.C.I.C. Professor
Dugald McDougall, M.Sc., F.C.I.C. Assistant Professor

N.B.-For key to system of numbering courses, see page 5.

1, 2. Pharmacy. First Term—An exposition of the principles on which pharmaceutical operations are based; the utilization of the processes for specific ends; the historical development of pharmacy; arithmetical calculations. Five hours a week.

Second Term—An extended consideration of the galenical preparations of the British Pharmacopoeia; the comparison of other important national pharmacopoeias with the British Pharmacopoeia. Three hours a week. Text books and books of reference: The British Pharmacopoeia, British Pharmaceutical Codex, Remington's Practice of Pharmacy, and others as needed.

- 3, 4. DISPENSING THEORY. A lecture course descriptive of the methods of dispensing the more important classes of extemporaneous preparations, such as powders, caches, tablets, granular effervescent salts, pills, ointments, pastes, oleates, mixtures, emulsions, and suppositories. Sterilization methods as they apply to pharmacy. Two hours a week.
- 5, 6. Practical Pharmacy. This course includes practice in the physical operations employed in pharmacy; dispensing of classes of preparations commonly prescribed by physicians; dispensing of difficult prescriptions; care of apparatus; methods of work. Six hours a week.
- 7, 8. Materia Medica. The detailed study of organic drugs, particularly those of the British Pharmacopoeia, the principal facts relating to their sources, preparation, identification, characteristics, purity, constituents and toxicology. The pharmacology of the more important drugs. References: Greenish, Mansfield, and others.
- 9, 10. Practical Materia Medica. A laboratory course to accompany 7, 8. A number of important drugs will be studied in detail to determine their characteristics as an aid to identification and evaluation. The microscope will be used to demonstrate the histological structure of certain drugs and their purity in the powdered form. One hour a week, second term.
- 11, 12. Prescriptions. This includes the Latin of pharmacy, posology, prescription arithmetic, the recognition and treatment of incompatibilities, the Pharmaceutical Act and other legislation affecting the practice of pharmacy, and all other topics of the Diploma course in Pharmacy not specifically classified elsewhere. One hour a week with additional periods as required. Texts and references as directed by the instructor.

- 13, 14. Physiology. A lecture course descriptive of the chief anatomical features and the main physiological processes of the animal body. One hour a week.
- 15, 16. Pharmaceutical Chemistry—Inorganic. Three hours a week.
- 17, 18. Pharmaceutical Chemistry—Organic. Three hours a week.
- 19, 20. Practical Pharmaceutical Chemistry. A laboratory course to accompany 15, 16; 17, 18. Nine hours a week.
- 21, 22. MATERIA MEDICA. The study of the chemical nature of important classes of plant constituents, including among others, the resins, oleoresins, fatty oils, carbohydrates, volatile oils, glucosides, alkaloids, and tannins. Two hours a week.
- 23, 24. Biologics. A lecture course outlining the preparations, characters, and medicinal uses of substances of biological origin, such as serums, vaccines, and gland products. One hour a week.
- 25, 26. Pharmaceutical Chemistry. An advanced course. Two hours a week, with assigned reading.
- 27, 28. Practical Pharmaceutical Chemistry. A laboratory course to accompany 25, 26. Six hours a week.
- 29, 30. Phytochemistry, with special attention to the medicinal substances contained in plants. Two hours a week with assigned reading and reports.
- 31, 32. Practical Phytochemistry. A laboratory course to accompany 29, 30. Six hours a week.

STUDIES IN SOCIAL WORK

The University of Manitoba is not in a position to establish, at the present time, any course in Social Work, but would call the attention of students who have any thought of interesting themselves in Social Welfare activities, whether in a professional way or in an advisory capacity, to the fact that the following courses offered by the University might contribute to their equipment in this field.

Under the Faculty of Arts and Science:

Psychology, including Social Psychology, Ethics, Economics, Sociology.

Under the Faculty of Agriculture and Economics:

Foods and Nutrition, Household Management, Economics of the Household, Family Relationships and Child Care.

The Deans of these two Faculties will consider favorably applications for enrolment as special students in the above courses. For further information the inquirer might consult the Dean of Arts and Science or the Dean of Agriculture and Home Economics, or the Director of the Department of Home Economics.

GENERAL REGULATIONS

REGISTRATION

New students, whether entering with matriculation only, or with advanced standing, should present their applications for admission to the Registrar, either in person or by mail, not later than August 31st, and preferably as early as possible in the summer. This applies to students who will take their classes at an affiliated college as well as to those who will enrol for instruction by the University Faculty.

Provision will be made for the formal registration of students of the Junior Division in Arts and Science at the University on Broadway from September 1st to September 14th. Indeed such registration may be made in the Registrar's office at any time during the summer by a student who has already been in attendance during a previous year. Final days for registration of Junior Division students and the days for payment by them of the required fees to the Bursar are September 13th and 14th. The regular lectures of the Junior Division at the University will begin on the 15th.

Special provision will be made for the registration of Senior Division students from September 1st to 21st. Such registration may indeed be made at any time during the summer by students who have already been in attendance during a previous session. Final days for registration of Senior Division students and the days for the payment by them of the required fees to the Bursar are September 20th and 21st. The registration of Senior Division students will take place at Fort Garry.

Registration in the Diploma course in Pharmacy, First and Second Years, will take place on September 13th and 14th, at Broadway, and lectures will begin on September 15th.

Special students may be registered whose applications have been endorsed by the Dean of the Faculty, subject to the approval of the Committee on Arts and Science Studies.

EXAMINATIONS

General Regulations

- 1. The regular examinations for undergraduates in Arts, Science and Pharmacy are given in part in December and in part in April of each academic year. For definite information as to the work upon which each of these sets of examinations is based, the student is referred to the curricula as set forth elsewhere in this Calendar.
- 2. Examinations in Arts and Science may be held at such outside centres in Manitoba, Saskatchewan, Alberta and British Columbia, as the Board of Studies may from time to time approve, it being understood that this does not apply to practical or oral examinations, where such are required.

CREDIT FOR TERM WORK

- 1. At the close of each term or session, as the case may be,* the instructors in any subject in the University and the affiliated colleges may make a report on the work of each student for the term or session just closing in the form of an award of marks, to be based upon the results of recitations, reports, essays, papers on interim examinations, or a combination of any number or of all of these tests, as indicating the character of the work throughout the term. The maximum credit allowed for term work in such a report shall be 20 per cent. of the total marks allowed for the subject or portion of the subject in question. Term marks, if they are to be accepted, must be reported to the office of the University Registrar before the University examination on the course in question is written.
- 2. On the acceptance of the report of the instructor, the marks given for term work are added to the marks obtained at the written examination in the subject (for which the minimum shall be 80 per cent. of the total marks allowed for the subject or portion of the subject in question), and this total shall determine the standing of the student.
- 3. In case the instructor submits no report, or his report is not accepted by the Committee on Arts and Science Studies for any reason, the standing of the student is determined entirely by the final written examination, which will be valued on the basis of the total marks allowed for the subject or portion of the subject in question.
- 4. In any case, the award of scholarships and medals in Arts and Science is made entirely on the results of the final written and practical examinations.

PASSES AND FAILURES

- 1. In the Junior Division and in the Senior General Division, in courses that run through both terms, mid-year examinations are regarded as progress examinations, and the student's standing is determined by the total showing made by him on the mid-year and final examinations taken together.
- 2. In the administration of the examinations in such courses, 35% of the total of the marks allotted to the subject is assigned to the mid-year examination and the balance to the final examination.
- 3. In the subjects of the Senior Honors Division, in courses that run through both terms, mid-year examinations are held or not, as may be determined by the Department or Committee of Examiners concerned, subject to the approval of the Committee on Arts and Science Studies. If they are held, the percentage of the total marks allotted to the subject that will be assigned to the mid-year examination, will be as determined by the Department or Committee of

^{*}For courses running through both terms of the session, the return of term marks, if made, shall be for the whole year's work but shall be reported at the close of each term for the term preceding; for other courses it shall be for the term preceding.

Examiners concerned, subject to the approval of the Committee on Arts and Science Studies.

- 4. In both Junior and Senior Divisions, in courses terminating at the end of the first term or beginning at the opening of the second term, the student's standing will be determined by an examination given at the end of the term in which the instruction is given. The allotment of marks to such examinations will be as determined by the Department or Committee of Examiners concerned, subject to the approval of the Committee on Arts and Science Studies.
- 5. When the work in a subject is divided into parts such as the theoretical part and the laboratory part in a science subject, or the grammar and prose part and the authors part in a language subject, final credit towards standing for a degree will not be given for any such part or parts of a subject until all have been completed and passed to the satisfaction of the examiners. Provisional credit will not, in the meantime, count towards determining eligibility to proceed with further work in the subject.
- 6. If a student fails to pass in any subject but secures 35 per cent. or over, he will have the privilege of repeating the examination in the subject in which he has failed without the requirement of further attendance, but if he obtains less than 35 per cent. he must repeat the class work of the subject in attendance either during a regular session or at a Summer School or must obtain approved tuition, before he is accorded another examination. He should, moreover, secure definite approval of his proposed arrangement for tuition before it is entered upon, and will be required to present a satisfactory certificates from his tutor covering the amount of tuition received and the range of work covered before he proceeds to examination. Such a student is advised, first of all, to take the Summer School instruction in the course in which he has failed, where it is offered. In case he pleads inability to attend the Summer School, or in case the Summer School program does not provide instruction in the subject in which he is deficient, he is required to apply by the opening date of the Summer School period of instruction for approval of a scheme of instruction, in the arrangements for which the Registrar's office will co-operate. Further details will be supplied on request.
- 7. A regular student who obtains less than 8 units of credit at the examinations of any session including the succeeding Summer School will not be permitted to continue his studies at the University nor be registered for University examinations during the next academic session.
- 8. A student in Arts and Science who has not, prior to the opening of the session, completed 36 units of credit, will be regarded as belonging to the Junior Division. A student in Arts and Science who has, prior to the opening of the session, completed at least 36 units of credit, shall be regarded as belonging to the Senior Division.
- 9. Students are permitted to group themselves into classes or years within the Divisions for purposes of social life, athletics, etc.
- 10. The pass mark in all undergraduate subjects in Arts and Science is 50 per cent.

- 11. (a) The pass mark in all professional subjects in Pharmacy is 60 per cent; in the remaining subjects of the course 50 per cent. When taken by subjects the pass mark for all professional subjects is 70 per cent.
- (b) A student failing on a professional subject of the course in Pharmacy with a mark below 40 per cent. or on a non-professional subject with a mark below 35 per cent. will be required to repeat the lectures and laboratory work of the course in a subsequent session or Summer School. In the case of all failures in Pharmacy, where the required supplemental examination is not passed within the year next ensuing, the same requirement of repetition of lectures and laboratory work will be made.
- (c) A mark of 60 per cent. is required to obtain credit in any non-professional subject on transfer from another course to the Degree or Diploma Course in Pharmacy.
- (d) A student of the First Year of the Diploma Course who fails to obtain 60 per cent. of the total maximum marks at the December examination, or who having obtained 60 per cent. of the total maximum marks fails in more than one subject, loses his standing and must repeat the work of the term.
- (e) A student of the Second Year of the Diploma Course who fails to obtain 60 per cent. of the total maximum marks at the December examination, or who having obtained 60 per cent. of the total maximum marks fails in more than one subject, loses his standing and must write on all the subjects of the examination again.
- (f) A student of the First Year of the Diploma Course, who, at the close of the April examinations, has not more than two conditions against him, is granted standing for the year with supplementals, provided his aggregate is at least 60 per cent. of the total maximum marks assigned to all the subjects of his course.
- (g) No student will be allowed to register for the Second Year of the Diploma Course who has a condition of the First Year registered against him.
- (h) A student of the Second Year of the Diploma Course, who, at the close of the April examination, has not more than one condition against him, is granted standing for the year with a supplemental, provided his aggregate is at least 60 per cent. of the total maximum marks assigned to his course.
- (i) A student who has failed at any examination may be required, at the discretion of the Dean of the Faculty and the instructors in the subject, to repeat his attendance before again writing on an examination.
- (j) The University reserves the right to terminate the connection of any student with the course in Pharmacy at any time for what it deems either mental, moral or physical unfitness for professional work.
- (k) Absence from lectures and laboratory periods will not be permitted except for reasons satisfactory to the instructors.
- (1) Diplomas in Pharmacy are graded "Pass" or "With Honors." To secure the latter grade, the student must obtain at least 75 per

cent. of the aggregate marks allotted to the full program of subjects of the Second or Final Year of the course and must pass without condition in each paper at his first examination thereon.

- 12. The September Supplemental Examinations begin on or about the first Tuesday of the month. For them, as for all other supplemental and special examinations, applications should be made at least thirty days in advance and on blank forms intended for the purpose, to be obtained from the Registrar.
- 13. The scale of fees for supplemental examinations is as follows:

A fee of \$5.00 for a single examination and \$1.00 for each additional examination taken at the same examination session, up to a maximum charge of \$8.00.

- 14. In all cases, students who are required to repeat a course of instruction or take a supplemental examination and who fail to present themselves for the same and pass at the Summer School or the September examination following the regular session at which the original failure was made, must, when they present themselves for examination at a later date, accommodate themselves to any changes in the curriculum that may have been made in the meantime.
- 15. A condition in any subject in which the supplemental examination privilege has been earned may also be removed by writing upon the examination paper or papers in the subject in question at any regular examination or examinations where such are provided.* In such a case the supplemental examination fee is required from the candidate whether or not he has paid at the same time a regular examination fee. He should also make application therefor on a special form provided for such cases by the Registrar.
- 16. September Supplemental Examinations are held at the University, and also at such outside centres in Manitoba, Saskatchewan, Alberta and British Columbia as the Board of Studies may from time to time approve.
- 17. Candidates for any supplemental or special examination should at least thirty days before the date of the examination, make suitable application to the Registrar, from whom blank forms of application may be obtained. The required fee must accompany the application. The fee for a regular examination is payable (along with the tuition fee, if such is required) at the time of registration for class work.

^{*}In the case of courses in which the "progress" plan of examination is prescribed, this is interpreted to mean both the mid-year and final papers. A single, comprehensive examination on such courses is provided only in September. Supplemental examinations on courses terminating at the end of the first term are given in September only.

APPEALS

1. Any candidate is at liberty to enter an appeal, within three weeks after the publication of the results of an examination, against the standing assigned him by the examiners and to request a revision of the marking of one or more of his papers. There is no special form of application for such revision.

2. The fee for such revision is \$2.00 for each paper. This fee is payable at the time the appeal is made, and is not returnable.

EQUIVALENT EXAMINATIONS

- 1. Provincial Department of Education examinations are accepted pro tanto by the University, insofar as the subjects and standing are, to the satisfaction of the Senate, the same as, or equivalent to, those required by the University—but candidates offering certificates of having passed such examinations are required to pass in such subject or subjects not covered by their certificates, as may, in the opinion of the Senate, be necessary for the completion of the examination, for partial standing towards which such certificates are presented.
- 2. Holders of certificates of educational value, other than those above mentioned, receive such recognition as the Senate may from time to time recommend.

Admission Ad Eundem Statum and Ad Eundem Gradum

Members of any other University in His Majesty's Dominion, or of any other University accredited by the University of Manitoba, who may apply for admission to this University, are not required to take the Entrance Examinations of the Faculty to which they belong, but may be admitted ad eundem statum or ad eundem gradum, on presentation of their credentials and payment of the required fee.

ATTENDANCE ON LECTURES AND PRACTICAL WORK

All students are expected to be regular in their attendance at lectures.

When the number of absences recorded against a student under the Faculty of Arts and Science in any course exceeds 10% of the number of lectures given for the term in that course, the instructor shall report the case to the Dean, who shall lay it before the Committee on Attendance and Progress of Students. When a student's attendance continues unsatisfactory, the Committee, with the concurrence of the instructor and of the Discipline Committee of the General Faculty Council, has power to exclude such student from classes or examinations, or both. The number of absences is reckoned from the opening date of the term and not merely from the date of registration of the student. When, after repeated warnings, a student is found to be persistently negligent with respect to his work or fails for any other reason to make satisfactory progress, the instructor shall report his case to the Dean, who shall lay it before the Committee on Attendance and Progress of Students. When the

student's work still continues unsatisfactory, the Committee, with the concurrence of the instructor and the Discipline Committee of the General Faculty Council, has power to exclude such student from classes or examinations or both.*

All students in Arts registered in an affiliated College will be expected to comply with the regulations as to attendance and work made by their College and a statement from the Faculty of an affiliated college in which any such student is registered to the effect that his attendance or work has been unsatisfactory, will be sufficient to debar him from examination.

No student is allowed to present himself for examination in any laboratory or drafting-room subject, unless he has satisfactorily carried out and recorded the minimum of practical work in each such subject decided upon by his Faculty; the scheme of practical work to be announced at the beginning of each session. This regulation applies to all classes of students, whether of Arts and Science, Engineering and Architecture, Medicine, Pharmacy or Agriculture and Home Economics doing practical work under the direction of the University Faculties.

^{*}A student who is debarred from University examinations in any subject or subjects at the end of a term or session because of insufficient attendance or unsatisfactory work, is not allowed to take examination in the subject or subjects subsequently until he has fulfilled the ordinary attendance regulations with respect to such subject or subjects, as applied to new students during a succeeding term or session and has done satisfactory work therein.

FELLOWSHIPS, SCHOLARSHIPS, BURSARIES, PRIZES AND MEDALS

The University of Manitoba is not responsible for the continuance from year to year of any fellowship, scholarship, bursary, exhibition, prize or medal, which it has not itself created.

The values stated below for the various scholarships offered by the University are the maximum values which the scholarships will not in any event exceed. Owing to the depletion of the Isbister Trust Fund, the Physiological Research Prize Fund, the Roderick McKenzie Memorial Fund, the Doupe Medal Fund, the Chown Prize Fund, the H. W. Kennedy Scholarship Fund, and the Alexander Morris Exhibition Fund, and until these funds have been completely restored, no assurance can, however, be given that the award of any of such scholarships, if made, will carry with it the payment of anything more than a nominal, if any, amount in cash.

UNDERGRADUATE SCHOLARSHIPS, BURSARIES AND PRIZES

(Open to Students of the University generally)

WISBISTER SCHOLARSHIPS L L

Junior Division in Arts and Science

- 1. There are offered ten scholarships of \$60.00 each to the students ranking highest on the aggregate of an approved course of the value of twenty units selected in accordance with the regulations governing the work for the degrees of B.A. and B.Sc. and at least twelve units of which is for work normally taken by a student in the First Year in the Division.
- 2. There are offered ten scholarships of \$60.00 each to the students ranking highest on the aggregate of an approved course of the value of twenty units, selected in accordance with the regulations governing the work for the degrees of B.A. and B.Sc. and at least twelve units of which is for work normally taken by a student in the Second Year in the Division.

The student must have clear Matriculation standing and must have taken the work within the regular session for which the scholarship is awarded. Work done in a previous session or at a Summer School may not be offered in competition for a scholarship. A minimum of 75 per cent. on the aggregate of the twenty-unit course will be required.

Senior Division in Arts and Science

1. There are offered ten scholarships of \$80.00 each to the students ranking highest on the aggregate of an approved course of the value of sixteen units, covering four subjects, selected in

accordance with the regulations governing the work for the degrees of B.A. and B.Sc., and at least twelve units of which is for work normally taken by a student in the First Year in the Senior Division. The competition is open to students both of the Senior General and the Senior Honors Division. A minimum of 75 per cent. on the aggregate of the sixteen-unit course will be required.

2. There are offered ten scholarships of \$80.00 each for general competition among the students taking subjects normally elected in the Second Year of a students' work in the Senior Honors Division in Arts and the students taking subjects normally elected in the Second Year of a student's work in the Senior Honors Division in Science. A minimum of 75 per cent. will be required in each of the subjects carried by the student.

Latin Philosophy

- 1. There is offered a scholarship of \$60.00 in the First Year in the Latin Philosophy Course for competition among French-speaking students.
- 2. There is offered a scholarship of \$60.00 in the Second Year in the Latin Philosophy Course for competition among French-speaking students.
- 3. A scholarship of \$80.00 is offered for competition in the Latin Philosophy Course of the Third Year in Arts.

A minimum of 75 per cent. on the aggregate of the examinations of the course on which the scholarship is awarded will be required.

General Conditions of Eligibility to Receive Isbister Scholarships

- 1. A student is not qualified to receive a scholarship unless:
- (a) He has been ranked above all competitors on the aggregate of the marks in the subject or subjects for which the scholarship is given, or, in cases where more than one scholarship is offered, is one of a group that has been so ranked, or has become eligible through reversion. (In all cases where general proficiency scholarships are awarded, not upon a fixed course but upon a course involving elective subjects, the practice has been adopted of raising the highest candidate in each subject to 100 per cent. and others likely to be in competition in proportion and of comparing the competitors upon the basis of their raised percentages).
- (b) And has removed at the same examination, or prior to it, any condition from a previous year or grade that may have been registered against him.
- 2. No student may hold more than one scholarship. If a student succeeds in otherwise qualifying for more than one scholarship in any year, he will be allowed to receive but one, and his name will be entered upon the list as having qualified for the other, though not entitled to any of the funds, and such other scholarships will be granted to the one ranking next to him, provided he is otherwise eligible.

Conditions Governing the Payment of Isbister Scholarships

The general conditions governing the payment of these scholarships are determined by the terms of the will under which the trust was established, from which the following is an excerpt:

"I desire it to be understood that I establish this trust for the benefit and improvement of education in the Province of Manitoba, and it is my wish that it shall take the form of a general scholarship or prize fund for the encouragement of meritorious students and scholars in the various places of education in the Province for both sexes, from the Common School to the Colleges and Institutions and Private Schools where the highest education is given without any distinction of race, creed, language or nationality. In the Lower Schools this encouragement may take the form of prizes, and in the Higher Schools that of scholarships of sufficient value to maintain or help to maintain the holder at a College or University either in Canada, Great Britain or elsewhere, and I leave the Governing Body of the Manitoba University free to carry out the objects of the trusts now confided to them in the manner which to them may seem best."

The scholarships are paid during the course of the annual session following that at the examinations of which they were won, provided the winners are duly enrolled and regularly in attendance at the University or an affiliated college, upon the full work of the next succeeding year of the degree course they have begun, and payment is made upon the following plan: One moiety on the second Monday in November and one moiety on the second Monday in February, upon receipt by the Comptroller of certification as to the award of the scholarship from the Registrar and as to compliance with the above requirements of registration and attendance from the Dean and the President in the case of students registered for instruction in the University, and from the Registrar of the University and the head of the College in question in the case of students registered for instruction in an affiliated college.

If, for any reason, the winner of a scholarship is not in attendance as an intra-mural student during the academic year next following that in which the scholarship is won, the scholarship will automatically be extended for another year.

If, for any reason, the winner of a scholarship is not in attendance during the two academic years next following that in which the scholarship is won, the scholarship will lapse.

VAIKINS SCHOLARSHIPS IN THE ENGLISH LANGUAGE LANGUAGE AND LITERATURE

The late Sir James Aikins, a former Lieutenant-Governor of Manitoba, and for many years a member of the Council of the University and its Honorary Bursar, established in his lifetime a trust for the purpose of providing annually what are known as the Aikins Scholarships in the English Language and Literature. They are awarded to the students ranking first at the annual examinations in English I, English II and English III H respectively, and have the same conditions attached as are attached to the Isbister Scholarships with respect to a minimum standing of 75 per cent. in the subject, concurrent completion of a full course of study of the year in question and freedom from prior conditions. They are paid during the next succeeding annual session upon the same plan as that of the Isbister scholarships. The amounts have been fixed for the present at the following:

| English | I | 75.00 |
|---------|-------|--------|
| English | II | 75.00 |
| English | III H | 125.00 |

THE HART SCHOLARSHIP IN CLASSICS

A scholarship of the value of \$50.00 is offered annually for competition among students of the First Year of the Senior Division in Arts, taking Latin III and either Greek III or Greek IV. It will be awarded on the combined results of the examinations of the session in both courses. This scholarship may be held along with the Isbister or other scholarships awarded on the examinations of the same year. The same conditions are laid down as in the case of the Isbister Scholarships, viz., a minimum standing of 75 per cent. in both the courses on which the award is made, concurrent completion of a full, normal year's work, and freedom from prior conditions. The scholarship will be paid during the next succeeding annual session upon the same plan as the Isbister Scholarships.

The Hart Scholarship is provided from the revenue of a trust fund created by a bequest for the purpose in the will of the late Mrs. Thomas Hart, made in memory of her husband the Rev. Professor Thomas Hart, M.A., D.D., who was professor of Classics in Manitoba College from 1872 to 1910, and her son, Lieutenant-Colonel William Malloch Hart, M.C., B.A., 1903, M.D., 1907.

B'NAI B'RITH SCHOLARSHIPS IN HEBREW

There are offered annually two scholarships of \$50.00 each, by Winnipeg Lodge No. 650 of the order of B'nai B'rith, one for competition among students taking Hebrew I and the other among students taking Hebrew II. The amounts will be paid to the winners during the succeeding annual session on the same plan as are Isbister scholarships.

KHAKI UNIVERSITY OF CANADA AND YOUNG MEN'S CHRISTIAN ASSOCIATION MEMORIAL BURSARIES

There are offered annually by the University of Manitoba a number of cash bursaries known as the Khaki University and Young Men's Christian Association Memorial Bursaries. They are considered as tenable along with other University Scholarships. The award is made by the University Council on the recommendation of a Committee of Selection to be appointed by the Council. In choosing the holders of bursaries, consideration is given not only to literary and scholastic attainments, but also to personal character, qualities of leadership and the financial circumstances of the applicants. Preference will be given to the sons and daughters of soldiers of the Great War and to soldier students who saw service overseas.

Applications for these bursaries will be received by the Registrar of the University during the first month of each annual session, and the award will be announced towards the close of the first term. A form of application may be obtained at the Registrar's office.

COLIN H. CAMPBELL CHAPTER I.O.D.E. BURSARIES

Two bursaries are offered for award annually to students of the Senior Division in Arts and Science whose Junior Division is clear of conditions and who have completed sixteen units of Senior Division of 67% or above. These bursaries of amount \$75.00 and \$50.00 respectively are provided by the Colin H. Campbell Chapter, Imperial Order Daughters of the Empire and selection of the recipients is made by a committee named by the Chapter. In addition to information as to the academic records of applicants supplied by the University Registrar, certain personal details with regard to parentage, family responsibilities, financial circumstances, etc., are required. Forms of application for the use of intending applicants will be supplied on request by the Registrar. Applications, to be considered by the Committee of Selection for 1937-1938, must be sent to the Educational Secretary of the Chapter, Mrs. W. S. Francis, 181 Mayfair Avenue, Winnipeg, so as to reach her not later than August 15th, 1937.

✓ THE CHANCELLOR'S PRIZE ✓

Through the generosity of the Chancellor of the University, Dr. J. W. Dafoe, a prize has been established to be known as "The Chancellor's Prize," of amount \$50.00.

The prize is awarded annually to the undergraduate registered in the University in a course leading to the degree of Bachelor of Arts who submits to the Secretary of the Senate the best original narrative, descriptive sketch, familiar essay or short story; or who submits the best original poem. In 1937–1938 and 1938–1939 the competition will be in the field of prose; in 1939–1940 and every third year thereafter it will be in the field of poetry.

Prose compositions should not contain more than five thousand words. The winner of the prize will be ineligible to compete for it in subsequent sessions.

The Board of Award consists of the Head of the Department of English of the Faculty of Arts and Science of the University and two others selected by the Department.

The time limit for the submission of narratives, sketches, essays, and poems in competition for the Chancellor's Prize is March 15th. The Board of Award will then report its decision to the Secretary of the Senate on or before May 1st.

NATIONAL FEDERATION OF CANADIAN UNIVERSITY STUDENTS' EXCHANGE STUDENTSHIPS

The National Federation of Canadian University Students has for a number of years been promoting a plan whereby specially selected students may be permitted to take one year of university work at an institution other than the one in which their course has been begun and in a different part of Canada. The purpose which it is hoped thereby to serve is to check to some extent the tendency of

Canadian university students to become narrow in outlook and sympathies and, possibly, in some case, to make practicable specialized study that would otherwise be unattainable.

For purposes of the plan the universities of Canada are divided into four divisions, as follows:

Division I-The University of British Columbia.

Division II—The Universities of Alberta, Saskatchewan and Manitoba.

Division II—The Universities of Ontario and Quebec.

Division IV—The Universities of the Maritime Provinces.

The general idea of the "exchange" is that a student who is ready to enter upon the penultimate year of his course, may apply for the privilege of the exchange provided that he will give an undertaking to return to his home university for his final year and in so doing will share to some extent with his fellow students the fruits of his year's study and contact with the student life in another institution. Under ordinary circumstances the institution which the student will attend during his year under the scholarship will be in a different division from the one in which his home university is located. The word "exchange" employed to describe the arrangement is not strictly accurate, in that it is not a requirement that the university receiving a Federation Scholar shall at the same time send one to the university from which such scholar comes. It is understood that the person accepted on the N. F. C. U. S. exchange plan is privileged to take a full normal year's course at the university receiving him without payment of tuition fees or fees for student extra-curricular activities. It is expected that in most cases this saving in fees will offset or more than offset the extra travel expense incurred. These scholarships are open to both men and women.

There is in all cases a local Selection Committee which in the University of Manitoba consists of the N. F. C. U. S. representative from the Council of the Students' Union, the University Registrar and the Dean of Faculty in which the student has been registered. Applications should be made before March 1st in any year to be considered for the following university year. Further information may be obtained from the N. F. C. U. S. representative or the

registrar.

UNDERGRADUATE SCHOLARSHIPS, BURSARIES AND PRIZES

(Open to Students Registered for Instruction under the University Faculty of Arts and Science)

SELLERS SCHOLARSHIPS IN ARTS

There are offered in the Junior Division in Arts and Science five scholarships of \$100.00 each to students registered under the subjects: (1) English I; (2) Mathematics I; (3) One of Latin I, French I, German I, Classical Greek II; (4) One of History I, Classical Greek IA, German IA, an additional language from (3); (5) One of Physics I, Chemistry I, an additional language from (3) or (4), History I (if not already taken).

There are also offered five scholarships of \$100.00 each to students registered under the University Faculty of Arts and Science and taking the following subjects: (1) English II; (2) One of Latin II, French II, German II, Classical Greek IIA; (3) Additional approved subjects of the Second Year of the Junior Division of aggregate credit value of 12 units, not more than 4 units of which may be for Science courses.

These awards will be based upon: (a) Scholarship, as shown by the students' grades upon the work of the twenty-unit course above outlined. (b) Financial circumstances.

They are intended to assist in defraying the expenses of the student in further academic studies at the University during the ensuing University year. If for any reason the student elects not to proceed during that ensuing year with his studies the scholarship will be awarded by reversion to the next qualified candidate in order of merit. The funds will be available at the Comptroller's Office, only for application on the University fees of the recipient, as soon as he has registered at the opening of the new session for a full course of studies of twenty units leading to the Bachelor of Arts degree under the University Faculty of Arts and Science or in some other approved course under that Faculty or other Faculties of the University. If the recipient should withdraw from the University before the full amount of the award has been used to discharge the University fees of such recipient, the remainder will be awarded by reversion to the next qualified candidate in order of merit, who is then in attendance at the University of Manitoba.

These scholarships are tenable along with Isbister or other Scholarships.

RICHARDSON SCHOLARSHIPS IN ARTS

There are offered in the Junior Division in Arts and Science five scholarships of \$200.00 each to students registered under the University Faculty of Arts and Science who are residents of Manitoba outside the metropolitan area of Winnipeg and who are taking the following subjects: (1) English I; (2) Mathematics I; (3) One of Latin I, French I, German I, Classical Greek II; (4) One of History I, Classical Greek IA, German IA, an additional language from (3); (5) One of Physics I, Chemistry I, an additional language from (3) or (4), History I (if not already taken).

These awards will be based upon: (a) Scholarship, as shown by the students' grades upon the work of the twenty-unit course above outlined. (b) Financial circumstances.

They are intended to assist in defraying the expenses of the

They are intended to assist in defraying the expenses of the student in further academic studies at the University during the ensuing University year. If for any reason the student elects not to proceed during that ensuing year with his studies the scholarship will be awarded by reversion to the next qualified candidate in order of merit. The funds will be available at the Comptroller's Office as soon as he has registered at the opening of the new session for a full course of studies of twenty units leading to the Bachelor of Arts degree under the University Faculty of Arts and Science or in some other approved course under that Faculty or other Faculties of the

These scholarships are not tenable along with Isbister or other

Scholarships.

HARRIS SCHOLARSHIPS IN ARTS

There are offered in the Junior Division in Arts and Science three scholarships of \$200.00 each to students registered under the University Faculty of Arts and Science who are residents of Manitoba outside the metropolitan area of Winnipeg and who are taking the following subjects: (1) English II; (2) One of Latin II, French II, German II, Classical Greek IIA, (3) Additional approved subjects of the Second Year of the Junior Division of aggregate credit value of 12 units, not more than 4 units of which may be for Science courses.

These awards will be based upon: (a) Scholarship, as shown by the student's grades upon the work of the twenty-unit course

above outlined. (b) Financial circumstances.

They are intended to assist in defraying the expenses of the student in further academic studies at the University during the ensuing University year. If for any reason the student elects not to proceed during that ensuing year with his studies the scholarship will be awarded by reversion to the next qualified candidate in order of merit. The funds will be available at the Comptroller's Office as soon as he has registered at the opening of the new session for a full course of studies of sixteen units of Senior Division work leading to the Bachelor of Arts degree under the University Faculty of Arts and Science or in some other approved course under that Faculty or other Faculties of the University.

These scholarships are not tenable along with Isbister or other Scholarships.

ISBISTER MATRICULATION SCHOLARSHIPS

For the purpose of the award of Matriculation Scholarships, the Province has been divided into nine districts. Of these eight are outside the City of Winnipeg and represent roughly certain groupings of the twenty-three Inspectorial Divisions set up by the Department of Education for the administration of its supervision of elementary and secondary schools. For details as to the respective limits of these districts see the "Programme of Studies for the Schools of Manitoba", published by the Department of Education. The ninth district is the City of Winnipeg itself.

In each of the Districts Nos. 1 to 8 there are offered for competition each year at the June examination of Grade XI for Matriculation two scholarships to be awarded to the student ranking first and the student ranking second respectively from the Schools of the District on the aggregate marks of the entire examination, The first scholarship to consist of \$50.00 and remission of tuition fees by the University for one academic year in the Faculty of Arts and Science, or a monetary equivalent with respect to tuition in another faculty of the University; the second scholarship to consist of remission of tuition fees by the University for one academic year in the Faculty of Arts and Science or a monetary equivalent with respect to tuition in another faculty of the University.

In District No. 9 there are offered for competition each year at the June examination of Grade XI for Matriculation, eight scholarships, four of them consisting each of \$50.00 and remission

of tuition fees by the University for one academic year in the Faculty of Arts and Science or a monetary equivalent with respect to tuition in another faculty of the University, and four of them consisting each of remission of tuition fees by the University for one academic year in the Faculty of Arts and Science or a monetary equivalent with respect to tuition in another faculty of the University to the four students ranking next highest from the aforesaid schools, preparatory institutions and affiliated colleges on the aggregate marks of the entire examination*.

In connection with the scholarships involving a money payment, that payment is made immediately on the announcement of the award and the establishment of the eligibility of the winner as required below.

The remission of fees accorded in connection with any of these scholarships is held to be forfeited if not taken advantage of immediately, but may be extended for cause at the discretion of the Board of Governors. An extension of one year is ordinarily granted on request.

The winner of a scholarship in any district is required before the scholarship is paid to him or the remission of fees thereunder accorded, to submit evidence that he has attended a school in the district for the greater part of the preceding school year, such evidence to be in the form of a certificate to that effect from the principal of such school or an inspector of schools in the district.

NORWOOD MATRICULATION SCHOLARSHIPS

The University offers to the School District of Norwood, No. 2113, entrance scholarships to be known as the "Norwood Scholarships." The University will remit one-half of the tuition fees (now \$105.00) for a full normal course to one or two students entering in any year, the First Year of the Junior Division in the Faculty of Arts and Science, provided that the student or students has or have been recommended by the special committee known as the Norwood Schools Scholarship Fund Committee, and that the student or students, has or have attained in the examinations qualifying for entrance to the first year of the Junior Division of the Faculty of Arts and Science, a standing of not less than 75 per cent. This offer is subject to an award by the Norwood Schools Scholarship Fund Committee to the student, or to each of two students who are recommended a cash prize of not less than \$75.00, and the offer is further subject to the provision that a member of the Senate of the University of Manitoba shall be a member of the Norwood Scholarship Fund Committee for the purpose of selecting the candidates for the Norwood Scholarships, and that the conditions of recommending a student or stu-

^{*}To be considered in the competition for scholarships a candidate must not only be recommended therefor by his principal and submit a special Scholarship Application to the High School Examination Board, but he must also write all the required papers of Grade XI at the one examination. To anticipate a part of the Grade XI examination at an earlier session or to accept school recommendation in a subject or subjects, even if the regulations otherwise permit it, will debar from scholarship competition. The subjects on which the competition is based are the following: English Literature, Composition, Canadian History and Economics, Algebra, Geometry and either three languages (from the four: Latin, Greek, French, German) or two languages with either Physics or Chemistry or one language with both Physics and Chemistry. Music, of at least the minimum grade accepted for matriculation credit, may be substituted for either Physics or Chemistry.

dents for the Norwood Scholarships are satisfactory to the Council of the University of Manitoba. The winner of an Isbister Matriculation Scholarship shall not be eligible to hold a Norwood Scholarship. This offer shall continue until the end of the regular registration period for the Junior Division of the Faculty of Arts and Science in the year 1940.

ISBISTER SCHOLARSHIP IN PHARMACY

There is offered an Isbister scholarship of \$60.00 in the First Year of the course in Pharmacy. A minimum of 75 per cent. on the aggregate of the examination of the course on which the scholarship is awarded will be required.

$\sqrt{ m SCHOLARSHIP}$ OF THE GERMAN-CANADIAN LEAGUE u u

There is offered annually a scholarship of \$25.00 for competition among students taking German II or German III. This scholarship is the gift of the German-Canadian League and is designed to assist a deserving student in pursuing further studies in the German language and literature. The award of the scholarship will be made by the University Senate on the nomination of a Committee of Selection consisting of three members, two of whom are appointed by the Senate and one by the German-Canadian League. In determining its choice the Committee will consider (a) the scholarship of the candidate as shown by his examination record, (b) personal qualities and promise of future progress in the subject, and (c) financial circumstances.

The financial undertaking in connection with the scholarship award will be discharged by placing the sum in question to the credit of the student in the Comptroller's Office as soon as he has registered at the opening of the succeeding session for an approved course in Arts involving additional studies in German. If for any reason the winner of the scholarship is unable to continue his study of German during the next following academic session the scholarship will be awarded to the next most deserving student who is able to utilize it.

DELTA PHI EPSILON BURSARY

The Kappa Chapter of the Delta Phi Epsilon Sorority offers annually a Bursary of \$50.00 to a woman student proceeding from Second Year to the Third Year in Home Economics or from the Junior Division to the Senior Division under the Faculty of Arts and Science. Consideration will be given to applications from eligible students by a committee consisting of the Director of Home Economics courses, the Dean of Arts and Science, the Dean of Women Students and representatives of the Sorority. The basis of the award will be in part the financial circumstances of the student and in part her general scholarship as shown by examination reports. The amount of the bursary will be placed to the credit of the recipient in the office of the Comptroller, before the opening of the new sessions, to be applied toward the payment of her fees. Applications should be sent to the Registrar not later than August 1st.

CHARLES GRAY CHOWN LOAN FUND

Loans from this fund may be made to undergraduates in any of the Faculties of the University who have attended the University for at least one academic session, and whose academic standing and character make them deserving of financial assistance. Copies of the regulations respecting the granting of loans and forms of application may be obtained at the office of the Comptroller.

LOAN FUND OF THE UNIVERSITY WOMEN'S CLUB

The University Women's Club has established a Loan Fund, the purpose of which is to give financial assistance to senior women students of the University of Manitoba, by loaning them sums of money to enable them to complete their course. No interest is charged on the loans, and the period of repayment is arranged to suit the convenience of the applicant. As the fund is not large, the loans are necessarily restricted in amount, and are intended chiefly to meet emergency requirement. Enquiries may be addressed to the Dean of Women of the University, or of an affiliated college, or to Miss Myrtle Lewis, Department of Education, Legislative Building, Winnipeg.

THE ALUMNI SPECIAL LOAN FUND

The following notice is inserted at the request of the University of Manitoba Foundation:

The Alumni Association of the University of Manitoba has created a student loan fund which is being administered by the University of Manitoba Foundation (see page 165). Only a limited amount is available at present, and no loan may be for a larger amount than \$100.00. To be eligible for a loan a student must have already completed at least two years of a course leading to a degree in Arts and Science, Law, Medicine, Engineering and Architecture or Agriculture and Home Economics (not including any preliminary courses at the University for students taking courses leading to a professional degree), and must be carrying during the academic session in which he applies for the loan the full work of a further year in his course. Applications for Alumni Association loans should be made in writing to the Foundation and will be referred to a Committee of Selection. The applicant should state, in the first instance, his full name, address, age, course taken and degree sought, and a summary of his scholastic record showing the number of years of his course completed and any pertinent information with respect to financial circumstances and needs, the names of two character references and of two instructors who will vouch for general academic record and attitude. He will later supply such additional information as the Committee may desire.

THE KENNEDY PRIZE IN GEOLOGY AND MINERALOGY

A prize of \$25.00 is offered by Mr. D. J. Kennedy annually for award to the student in the course, Geology V, who submits the best essay on a subject in the general field of Geology and Mineralogy. Particulars as to the subject and conditions of competition will be announced soon after the opening of the new session.

SCHOLARSHIPS, BURSARIES AND FELLOWSHIPS FOR GRADUATE STUDY AND RESEARCH

UNIVERSITY TRAVELLING FELLOWSHIPS

Two University Travelling Fellowships, each of the value of \$400.00, are offered for award each year to graduates of the University of Manitoba and under the following conditions*:

- 1. The object of the award of these Fellowships shall be to assist the students to whom they are given to enter upon graduate work in an approved University.
- 2. One Fellowship shall be awarded each year to a Bachelor of Arts of the University of Manitoba and one every alternate year to a Bachelor of Science of the University of Manitoba and one every alternate year to a Bachelor of Science in Engineering or a Bachelor of Architecture of the University of Manitoba. The awards of 1938, if any are made, will be in Arts and in Engineering or Architecture.
- 3. In order to be eligible to become a candidate for one of these fellowships, a student must—
- (a) Hold the requisite degrees of the University of Manitoba as indicated above.
- (b) Have spent at least three academic years in attendance at the University of Manitoba or an affiliated College.
- 4. In considering the claim of each candidate for a University Travelling Fellowship, the Committee of Nomination shall take into account the following:
- (a) The candidate's scholarship as shown by his undergraduate course and subsequent studies, if any;
 - (b) The candidate's personality and general record;
 - (c) The candidate's ability to profit by postgraduate studies;
- (d) The relation of the postgraduate course proposed by him, both to his undergraduate studies and to the career he plans to follow.

^{*}As the stipends of these Fellowships are provided out of Isbister Trust revenue, the general reservation announced on page 127 applies to them, as to the Isbister Scholarships.

FRENCH GOVERNMENT BURSARY

By the generosity of the Government of the French Republic, the University of Manitoba is permitted to nominate from time to time a student who has shown promise of proficiency in French studies, to receive a bursary of 6000 francs (with an additional allowance of 5000 francs for travelling expenses) to enable him to study for a year in France. For further particulars any one interested should consult the head of the French Department or the Registrar.

SCHOLARSHIP OF THE CANADIAN FEDERATION OF UNIVERSITY WOMEN

- The Scholarship of the Canadian Federation of University Women of the value of \$1250, available for study or research work, is open to any woman holding a degree from a Canadian University. In general, preference will be given to those candidates who have completed at least one or two years at graduate study and have a definite plan of advanced study or of research in view. The award is based on evidence of character and ability of the candidate and the promise of success in the subject to which she is devoting herself.
- There are no application blanks, and application is made by letter to the Convener of the Scholarship Committee, Dr. A. Vibert Douglas, McGill University, Montreal, P.Q.
 Applications and recommendations must be received not later

than February 1st. None can be accepted after that date.

- The letter of application should contain an account of the applicant's educational training and a statement in full of the plan of study or research she intends to pursue. This information should be accompanied by:
 - A written statement from the President of the college or University awarding the degrees held by the applicant to the effect that her application as a suitable candidate is approved.
 - Theses, papers or reports of investigations published (b) or unpublished.

All papers submitted by the applicant will be returned if postage is sent for that purpose. Confidential letters will be kept.

Testimonials as to her health, character, ability and scholarship should be sent directly to the Convener by the professors or others who support the candidature.

All testimonials and references should be in writing. The committee will assume no responsibility for making enquiry beyond the paper submitted.

- The choice of the University at which the successful candidate shall pursue her study or research work is left to the Committee of Selection, in consultation with the candidate.
- 6. The scholarship is payable in two equal instalments on July 1st and January 1st by the Treasurer of the Federation, provided the successful applicant sends the address for those dates.

7. At the end of her tenure, the candidate shall send a report of her work, together with a statement of its worth from the professor or other authority conversant with her research, to the Convener of the Scholarship Committee.

THE I.O.D.E. OVERSEAS POST GRADUATE SCHOLARSHIP

A Scholarship of the value of \$1400 for post graduate study in any British University is offered each year to graduates of the University of Manitoba; students in the last year of their course may also apply. Applications for the Scholarship for 1938-1939 must be sent in by October 6th, 1937. Application forms and information may be obtained from Mrs. L. McQuillin, Provincial Educational Secretary I.O.D.E., 398 Maryland Street (or 200 Donalda Block), Winnipeg.

SCIENTIFIC CLUB'S RESEARCH PRIZE

The Scientific Club of Winnipeg, desiring to foster the spirit of research in the University of Manitoba, offers from time to time a prize known as the Research Prize of the Scientific Club of Winnipeg, under the following conditions:

- 1. The next award shall be made by the University Senate on the nomination of the Scientific Club of Winnipeg at a date to be announced, and the prize shall be of the value of \$150.00.
- 2. The prize shall be awarded for the most meritorious research work conducted in the University of Manitoba by an undergraduate or graduate of any University, who shall have passed his last degree examination not earlier than two years prior to the date of award. Members of the Faculty and those who have already received the degree of Ph.D. in Science or D.Sc. or equivalent degree, shall not be eligible for the award.
- 3. The eligibility of candidates not included in the above regulation shall be decided by the Scientific Club.
- 4. A person who has once received the award, either in whole or in part, shall not again be eligible.
- 5. No award shall be made unless the researches submitted are, in the opinion of the Club, suitable for publication in a journal of repute.
- 6. Candidates shall deposit three copies of published papers or of a full properly typewritten report of the research to be submitted, with the Registrar of the University on or before the 20th of March, preceding the date of award.

1851 EXHIBITION SCHOLARSHIPS

The Royal Commission for the Exhibition of 1851 has included the University of Manitoba in the list of overseas Universities that are invited to recommend candidates for the Scholarships that are awarded annually by the Commissioners. Every candidate put forward must be a British subject under twenty-six years of age and a bona fide student of science of not less than three years' standing. His qualifications for pursuing independent research must be such as to entitle his candidature to serious consideration. The scholarships are of the value of £250 per annum with certain additional allowance. They are tenable ordinarily for two years, the continuation for a second year depending upon the satisfactory nature of the scholar's first year's work. In case of exceptional merit, where it appears that the renewal is likely to result in work of scientific importance, renewal for a third year may be accorded. These Scholarships may be held, with the approval of the Commissioners, at any institution in Great Britain or abroad, but a scholar will not be permitted to conduct his investigations in the country in which he has received his scientific education.

Applications from students of the University of Manitoba to have their records considered with a view to their possible nomination to the Commissioners for one of these Scholarships, should be in the hands of the Registrar by March 1st in any year.

THE RHODES SCHOLARSHIP

The trustees of the late Cecil Rhodes have assigned a Rhodes Scholarship to the Province of Manitoba.

This Scholarship will hereafter be thrown into open competition in the Province, subject to the following conditions:

- 1. It is open equally to students in all Faculties.
- 2. Candidates must be British subjects, with at least five years' domicile in Canada and unmarried. They must have passed their nineteenth, but not have passed their twenty-fifth birthday, on October 1st of the year for which they are elected.
- 3. Candidates must have reached such a stage in their course at some recognized degree-granting University or College of Canada, that they will have completed at least two years at the University or College in question by October 1st of the year for which they are elected.
- 4. Candidates may compete either in the Province in which they have received at least two years of their college education, or in the Province in which they have their ordinary private domicile, home or residence.

In each Province there is a Committee of Selection, in whose hands the nomination will rest, subject to ratification by the Trustees. The Secretary of the Committe of Selection for Manitoba is Professor Skuli Johnson, University of Manitoba, Winnipeg, who will supply a form of application on request.

In that section of the Will in which he defined the general type of scholar he desired, Mr. Rhodes wrote as follows:

"My desire being that the students who shall be elected to the scholarships shall not be merely bookworms, I direct that in the election of a student to a scholarship regard shall be had to:

1. His literary and scholastic attainments.

2. His fondness for and success in manly outdoor sports such as cricket, football and the like.

 His qualities of manhood, truth, courage, devotion to duty, sympathy and protection of the weak, kindliness, unselfishness and fellowship.

4. His exhibition during school days of moral force of character and of instincts to lead and to take an interest in his schoolmates; for those attributes will be likely in after life to guide him to esteem the performance of public duty his highest aim.

Distinction both in character and personality and in intellect is the most important requirement for a Rhodes Scholarship, and it is upon this that Committees will insist. Success in being elected to office in student organizations may or may not be evidence of leadership in the true sense of the word. Cecil Rhodes evidently regarded leadership as consisting in moral courage and interest in one's fellow men quite as much as in the more aggressive qualities. Physical vigour is an essential qualification for a Rhodes Scholarship, but athletic skill is of less importance than the moral qualities developed in playing outdoor games. Poverty does not give a special claim to a Scholarship. The strongest candidate will be appointed regardless of his financial circumstances. In general candidates will be preferred who will be under the age of 23 when they go into residence at Oxford. In the absence of a strong candidate the Committees will make no appointment.

Every candidate for a Scholarship is required to furnish to the Committee of Selection for his Province the following:

- (a) A certificate of age.
- (b) A photograph preferably unmounted and not larger than 4×7 inches.
- (c) A written statement from the President or Acting President of his College or University to the effect that his application as a suitable candidate is approved.
- (d) Certified evidence as to the courses of study pursued by the scholar at his University, and as to his grading in those courses. This evidence should be signed by the Registrar or other responsible official of his University.
- (e) A brief statement by himself of his athletic and general activities and interests at College, and of his proposed line of study at Oxford.
- (f) References from six persons well acquainted with him whose addresses must be given in full and under at least two of whom he must have studied.
 - (g) A medical certificate.

Except under exceptional circumstances the Committee of Selection may summon a candidate to attend a meeting of the Committe of Selection and to write a brief essay.

The next appointment for Manitoba will be made in 1937, the tenure to begin in 1938. Applications for the Scholarship, with all required material, must reach the Secretary of the Committee of Selection not later than November 10th, 1937.

A Rhodes Scholarship is tenable at the University of Oxford and may be held for three years. Since, however, the majority of Rhodes Scholars obtain standing which enables them to take a degree in two years, appointments are made for two years in the first instance, and a Rhodes Scholar who may wish to remain for a third year will be expected to present a definite plan of study for that period, satisfactory to his College and the Rhodes Trustees.

Rhodes Scholars may be allowed, if the conditions are approved by their own College and by the Oxford Secretary to the Rhodes Trustees, either to postpone their third year, returning to Oxford for it after a period of work in their own countries, or may spend their third year in post-graduate work at any University of Great Britain, and, in special cases, at a University on the continent of Europe, the overseas Dominions, or in the United States, but not in the country of their origin. The stipend of a Rhodes Scholar is fixed at £400 per year. At most Colleges, and for most men, this sum is not sufficient to meet necessary expenses for term-time and vacations, and scholars who can afford to supplement it by say £50 per year from their own resources, will find it advantageous to do so.

The scholars will come into residence in October of the year for which they are elected.

Students who have obtained the B.A. Degree at the University of Manitoba provided that they have resided three years at this University may apply for "Senior Standing" at Oxford, exempting them from all preliminary and intermediate examinations, and making it possible for them to take their Final Honours Schools and B.A. Degree, in two years.

Students who have resided two years at a Canadian University, and passed the examinations incident to a two years' course which has included two languages, other than English, one of which must have been either Latin or Greek, may apply for Junior Standing at Oxford, which carries with it exemption from Responsions but not from the intermediate examination. They can proceed to their B.A. Degree in two years, provided that they obtain Honours either in Moderations or in the Final Honours Schools. Greek is no longer an obligatory subject at Oxford.

Manitoba Rhodes Scholars

| Name | College |
|-----------------------------------|---------------|
| 1904—John MacLean | Worcester |
| 1905—William John Rose | Magdalen |
| 1906—Stuart Eccles Beech | Queen's |
| 1907—Andrew Howard Miller | Merton |
| 1908—Howard Robert Lawrence Henry | Queen's |
| 1909—Skuli Johnson | Oriel |
| 1910—Joseph Thorarinn Thorson | New |
| 1911—Eldon Rooklidge Siddal | St. John's |
| 1912—Alfred Ewert | St. John's |
| 1913—William Nason | Oriel |
| 1914—Simon Abrahamson | Merton |
| 1915—Morley Lougheed | Christ Church |
| 1916—Erskine Wallace Ireland | New |

| Name | College |
|---------------------------------------|------------|
| 1917—William Burton Hurd | Queen's |
| 1918—George Percival Raymond Tallin | Queen's |
| 1919—Charles Rhodes Smith | Queen's |
| 1920—Edward Bruce Pitblado | Queen's |
| 1921—John King Gordon | Queen's |
| 1922—Graham Spry | University |
| 1923—Arnold Danford Heeney | St. John's |
| 1924—Arthur Wallace Johnston | Brasenose |
| 1925—Reginald Wilfred Westgate | Balliol |
| 1926—Hector Allard | St. John's |
| 1927—John Ross McLean | |
| 1928—David McIntosh Turnbull | St. John's |
| 1929—Lawrence Christopher Bonnycastle | Wadham |
| 1930—John Robert Beattie | Queen's |
| 1931—James Elliott Coyne | |
| 1932—William Lewis Morton | St. John's |
| 1933—Carl Arthur Winkler | Wadham |
| 1934—Frank William Oliver Jones | New |
| 1935—Joseph Boutelle Reid | Merton |
| 1936—John McLaurin Teakles | St. John's |
| 1937—Hart Duncan Clark | Merton |

MEDALS IN ARTS AND SCIENCE

- 1. The Governor-General's Gold Medal, the gift of His Excellency the Governor-General, is offered annually for competition among students who have completed the Junior Division and sixteen units in either the Senior General or the Senior Honors Division, the aggregate upon the entire fifty-six units of work then completed being taken into account.
- 2. A University Gold Medal and a University Silver Medal are offered for competition annually among students completing the work of the Senior General Division in Arts and Science and proceeding to the B.A. or B.Sc. degree, comparison being made on the basis of the method of raised percentages used in the determination of general proficiency scholarship awards and the students' records being considered for the last sixteen units of credit they have earned, on the aggregate of which they must have attained a standard of at least 80 per cent., and twelve of which must be for work normally taken in the second year of the Senior General Division.
- 3. Two University Gold Medals are offered for competition annually among students completing the work of the Senior Honors Division in Arts and Science, one among those proceeding to the B.A. Honors degree, and one among those proceeding to the B.Sc. Honors degree. Only those will be considered in the competition who have attained a standard of at least 80 per cent. on both their subjects, comparison being made on the basis of the method of raised

percentages used in the determination of general proficiency scholarship awards and the students' records being considered for the last sixteen units of credit they have earned, all of which must be for work normally taken in the Third Year of the Senior Honors Division.

4. A Gold Medal, donated annually by the Omega Chapter of Tau Delta Phi Fraternity, in memory of the late Ephraim Buckwold, B.A., 1930, who died in 1931 while a student of Medicine, is awarded to the regular student of the Senior Division in Arts and Science, who has taken Economics in the Second Year of that Division and has attained the highest standing of his class (not less than 80%) on the aggregate of the First Year Senior Division course in Economics (Economics III) and the portion of the Second Year Senior Division course in Economics that is common to Economics IV, Economics IVG and Economics IVH. This medal is known as the Ephraim Buckwold Medal in Economics.

MEDALS IN PHARMACY

A Silver Metal, offered by the Council of the Manitoba Pharmaceutical Association, is awarded annually to the student standing first in order of merit at the examination of the first year of the diploma course in Pharmacy, provided his standing on the aggregate of the marks be 80 per cent. or above.

A Gold Medal, offered by the Council of the Manitoba Pharmaceutical Association, is awarded annually to the student standing first in the order of merit at the examination of the Second Year of the diploma course in Pharmacy, provided his standing on the aggregate of the marks be 90 per cent. or above.

A Silver Metal, offered by the Council of the Manitoba Pharmaceutical Association, is awarded annually to the student first (or second) in the order of merit at the examination of the Second Year of the Diploma course in Pharmacy, provided his standing on the aggregate of the marks be 80 per cent. or above.

A Silver Medal, known as the Flexon Silver Medal, offered by the Council of the Manitoba Pharmaceutical Association in memory of Mr. Charles Flexon, a former president of the Association, is awarded annually to the student ranking highest (with 85 per cent. or above) In the subject of Chemistry of the Second Year of the Diploma course in Pharmacy. The medal is accompanied by a cash prize of \$25.00, known as the Mallinckrodt Prize in Chemistry. The cash award is made for the highest standing in the subject, even when the student does not qualify for the Flexon Medal.

DEGREES IN ABSENTIA

No degree will be conferred *in absentia* except where good reasons for absence have been submitted to and approved by the Board of Studies, or the Senate, and an additional fee of ten dollars may be exacted in each case where permission is granted.

UNIVERSITY ACADEMIC DRESS

The correct academic dress for graduates of the University is as follows:

- 1. A mortarboard of black material with a black tassel.
- 2. A gown of black stuff extending to within eight or nine inches from the ground. For Bachelors the gown should be of Oxford shape with closed front and open, pointed sleeves. For Masters it should be of Oxford shape with closed front and long closed sleeves with boxed or squared ends. For Doctors of Medicine and Doctors of Philosophy it should be for the present of the same style as for Masters.
- 3. A hood, in shape, materials and colors as indicated below:

 In the materials and colors prescribed by the University for the hoods to be worn by graduates, the following general principles are observed:
- (a) All Bachelors' hoods are of the "simple" or "Oxford" shape, are of black worsted stuff (except that for the Bachelor of Laws degree, which is of black silk), are edged with white rabbit skin and bear a narrow braid of green silk on the black material at a short distance from the rabbit skin edging. They have distinctive colored silk linings as hereunder.
- (b) All Masters' hoods are of the "simple" or "Oxford" shape, are of black colored silk and have distinctive colored silk linings as hereunder.

The linings for Bachleors' hoods are as follows:

Bachelor of Arts-No lining.

Bachelor of Laws-White silk.

Bachelor of Education—Royal blue silk.

Bachelor of Science—Gold-yellow silk. This lining is basic for all Bachelor of Science degrees and each has a further distinguishing band of color, about three-eighths of an inch in width, on the gold-yellow lining at a short distance from the rabbit skin edging.

Bor Bachelor of Science in Agriculture—Green.

For Bachelor of Science in Pharmacy-Light blue.

For Bachelor of Science in Engineering-Royal blue.

For Bachelor of Architecture—Deep orange.

For Bachelor of Science in Home Economics-Maroon.

For Bachelor of Science in Medicine—Purple.

The linings for Masters' hoods are as follows:

Master of Arts-Scarlet corded silk.

Master of Education—Royal blue corded silk.

Master of Science (including Master of Science in Engineering and Master of Science in Agriculture)—Gold-yellow corded silk.

The hood for the degree of Doctor of Medicine is of the "full" or "Cambridge" shape and is of black cashmere lined with purple corded silk.

The hood for the degree of Master of Surgery is the same as for the Doctor of Medicine, with the addition of a band of violet silk at a short distance from the edge of the lining.

CORRESPONDENCE COURSES IN ARTS

The practice that formerly obtained of permitting students to undertake the preparation of certain courses in Arts privately by personal undirected study and, upon giving due notice, to write the regular examinations thereon for credit, was definitely abandoned by the University in 1935. The Senate has, however, now arranged to offer correspondence instruction to students who find it impossible to attend the University during the regular winter session and who are anxious to proceed more rapidly with their studies than is possible through the use of the Summer School alone.

The correspondence study plan as proposed will provide instruction through the medium of study outlines and exercises, themes or essays regularly submitted by the student and returned to him by an instructor with corrections and criticisms. The student registered for correspondence direction will write on the same examinations and will be required to meet the same standards as students in attendance.

For the 1937-1938 session correspondence courses will be available for students with the proper prerequisite standing in the following courses of the Second Year of the Junior Division: English II, History II, Mathematics II, Mathematics IIA, Latin II, Greek IA, Greek II, Logic II, Psychology II and Economics II, provided that in the case of any course at least fifteen students shall enroll and provided that further the enrolment shall reach the necessary minimum in at least two four-unit courses or their equivalent. Correspondence courses will not be offered in subjects of the Senior Division.

Exercises, themes or essays will be required fortnightly from a student taking a four-unit course and monthly from a student taking a two-unit course. Irregularity on the part of a student in submitting these may result in his exclusion by the Committee on Arts and Science Studies from further participation in the work of the course.

An extra-mural student will be permitted to take only one four-unit correspondence course or its equivalent in any one regular University session. A student taking any course in attendance is not permitted to carry a correspondence course concurrently.

The following fees will be charged for correspondence courses:

| | Four-unit Two-uni Course Course | Т |
|--|------------------------------------|---|
| Registration Direction and Tuition Examination | | |
| Totals | \$28.00 \$14.00 | |

A student registering for the first time in Arts and Science is, of course, responsible for the usual Entrance Fee of \$2.00.

Local supervision will be provided on request for examinations at outside centres approved by the Senate on payment of the following additional fees:

For examinations at Brandon, Dauphin or Portage la Prairie: For first hour and a half or two-hour examination, \$1.75; for each additional hour and a half of examination time, 25c.

For examination at any other approved centre: For first hour and a half or two-hour examination, \$3.00; for each additional hour and a half of examination time, \$1.00.

Applications on preliminary application forms provided by the Registrar should be made not later than September 1st, after which date decision will be made as to the courses in which correspondence instruction can be offered for the coming session. It may be necessary in certain courses for correspondence students to provide themselves with books of reference other than those that a student in attendance who has access to the University Library facilities must purchase. Such books may be purchased through the University Book Store to which, if the student desires it, they may be resold at the end of the course of study, if in good condition, at current rates for used books. The Book Store may in some instances be able to supply used copies.

THE MANITOBA UNION

The residence building at the Fort Garry site of the University is operated for students as the centre of their social and community life. There are in this building facilities to provide accommodation for five hundred students, men and women, besides gymnasia, baths, swimming pools, and recreation rooms for all who use the campus.

Applications for rooms in the Manitoba Union must be made to the Comptroller's Office in the Administration Building at the Fort Garry site. The receipt given by the Comptroller's Office for the payment made, should then be taken to the Dean of Women by women students, or to the Dean of the Men's Residence by men students, by whom rooms will be allotted.

Students who enter the residence are required to sign an agreement to pay the charge for the full term at the current rate for board and room, which, for the convenience of the student, is payable monthly in advance. In case of withdrawal, the unused portion of the amount paid is refundable, providing the student has given one week's notice of withdrawal. If the notice has not been given, the charge for one week's board and room will not be refunded when the student withdraws.

The following represents the approximate cost* of board and room for a full session:

| First Term | \$ 87.30 106.80 |
|---------------|------------------------|
| Caution Money | 5.00 |
| | \$199.10 |

Against the caution money will be assessed the value of all property broken or damaged by the student, and the balance will be refunded at the close of the session. If keys are not returned the value thereof will be deducted from caution money.

^{*}This amount is, however, owing to prevailing conditions, subject to change without notice.

UNIVERSITY BOOK DEPARTMENT

In order to ensure prompt and reliable service in connection with the supply of text books, notebooks and other materials for students' use, the University operates a book store with branches in the Broadway Buildings of the University near the Osborne St. entrance, and in the Arts Building on the Fort Garry site, at which everything of this nature can be purchased at the lowest possible prices. Students are urged to make full use of the facilities provided. Any who expect to have available time during the summer are strongly advised to secure as many texts as possible before leaving for the vacation. Students when out of town may secure their books and supplies by mail.

Address all orders to: The Manager,
UNIVERSITY OF MANITOBA BOOK DEPARTMENT
WINNIPEG.

FEES

PAYMENT OF FEES

All fees, including those for tuition, board and room, and miscellaneous fees, are payable to the Comptroller either at the Broadway buildings or at the Fort Garry site, Winnipeg. All cheques or money orders used for the payment of fees, should be drawn in favor of the University of Manitoba, and, if mailed, should be addressed to the Comptroller of the University of Manitoba, Winnipeg.

All fees other than those for tuition, are payable in advance, at the time of registration. One-half of the tuition fee is payable in advance, and the other half is payable at the commencement of the

second term without written or other notice.

Any departure from this plan of payment subjects the portion of the fees which is payable at the time of registration, if unpaid after October 15th, to a charge of 1% per month or portion thereof. If the second half of the tuition fee or any portion of it remains unpaid after January 10th, it will be subject to a similar charge.

Regular students who tender the first payment of fees after the last date set out in the calendar for the payment of fees, shall be required to pay a late admission fee of \$2.00.

Supplemental examinations must be paid for at the time application is made for them.

Students of Medicine, Law, the affiliated colleges, the first two years in Arts and Science, and the first year in Engineering, may pay fees at Room 151 Broadway Building. From June 1st to August 31st, the Broadway office will be open from 1.30 to 4.15 p.m., on Tuesdays and Fridays only. All other students shall be required to pay fees at the head office of the University at the Fort Garry site.

The following fees are required:

REGISTRATION IN ARTS AND SCIENCE

| Junior Division, | each four-unit | t subject | \$2.00 |
|------------------|----------------|-----------|--------|
| Senior Division, | each four-uni | t subject | \$2.50 |

EXAMINATIONS IN ARTS AND SCIENCE

Regular Examinations:

Junior Division in Arts and Science—
Each four-unit subject _______\$3.00
and proportionately for subjects of differing credit value.

Senior Division in Arts and Science—

Each four-unit subject \$3.75 and proportionately for subjects of differing credit value.

Supplemental Examinations:

Junior Division and Senior Division-

A fee of \$5.00 for a single examination and a further fee of \$1.00 for each additional examination taken at the same examination session, up to a maximum of \$8.00.

TUITION IN ARTS AND SCIENCE

| TUITION IN ARTS AND SCIE | NCE |
|--|------------------|
| Junior Division— Each four-unit subject | \$21.00 |
| and proportionately for subjects of differin | ng credit value. |
| Senior Division— Each four-unit subject | \$28.75 |
| and proportionately for subjects of differin | |
| REGISTRATION, TUITION AND EXAM PHARMACY | INATIONS IN |
| Registration, each annual session | |

(The tuition and other fees of each special student are determined by the Dean of the Faculty concerned after consultation with the Professor in whose department the student receives instruction, but they shall bear the same relation to the fees charged for a full course as the amount of work taken bears to a full course.)

Supplemental Examinations, as in Arts and Science.

\$ 15.00

2.00

5.00

Examination, each annual session.

MISCELLANEOUS FEES

Laboratory Fees

Laboratory fees are charged students taking Science courses on the following scale, viz., \$2.50 per full subject in the Junior Division and Senior Pass Division in Arts and Science and in Pharmacy, and \$5.00 per full subject in the Senior Honors Division in Arts and Science. The maximum laboratory fee in the Junior Division and in Pharmacy will be \$5.00 and in the Senior Division will be \$10.00.

Library Fees

An annual Library fee of \$2.00 is required from each Arts and Science student taking any University classes and is payable at time of registration. A student taking instruction only at an affiliated College must pay this fee only in case he wishes to use the University Library.

Degree Fees

| (The fee for Degree or Diploma is payable at the time registra- |
|---|
| tion is made for the final year's work of the course leading to the |
| degree or diploma.) |
| For the Degree of B.A. \$10.00 |
| For the Degree of M.A. 10.00 |
| For the Degree of B.Sc. (Phar.) |
| For the Degree of B.Sc. 10.00 |
| For the Degree of M.Sc. 10.00 |
| For the Diploma in Pharmacy 10.00 |
| For the conferring of any Degree in absentia (for which the |
| consent of the Senate must be secured), an additional |
| fee of10.00 |
| For admission ad eundem statum 5.00 |
| For admission ad eundem gradum 5.00 |
| |
| General |
| Re-reading, each paper \$ 2.00 |
| Entrance Fee (payable the first time a student registers under |

the Faculty of Arts and Science)

For a Transfer of Standing

| For a Certificate of Standing | 2.00 |
|---|------|
| For a Statement of Marks, on request | 1.00 |
| For use of a Locker, each annual session* | 1.00 |

Caution Money

All undergraduate students registering for classes in the University,† all candidates for the degree of M.S.c., and all candidates for the degree of M.A., who are taking a full program of preliminary work, are required to deposit with the Comptroller at the beginning of each session the sum of \$5.00 Against this will be assessed the value of all equipment broken or materials wasted in any way other than in the legitimate course of class work. If the amount is inadequate, a further assessment may be made if the need therefor appears. Unforfeited balances will be refunded at the close of the session, but not prior to that time under any circumstances.

Student Organization Fees

The annual fee of \$8.50 set by the University Arts, Science, and Pharmacy student groups, and approved by the Board of Governors, is payable by all undergraduate students, all candidates for the degree of M.Sc., and M.A., who are taking a preliminary course, to the Comptroller at the time of registration, and those sums are held by him to the credit of the respective student treasurers.

Post-Graduate Students' Fees

The following fees are payable by candidates for the degree of M.Sc., M.Arch., M.A., or Ph.D., as shown. The terms and conditions of payment are the same as those for undergraduate students.

Preliminary M.A. and M.Sc. Courses, per Session

| Parallel with undergraduate courses for honors degrees. |
|--|
| Registration \$ 2.50 per four-unit course |
| Tuition 28.75 per four-unit course |
| Examination 3.75 per four-unit course |
| Laboratory 2.50 per four-unit course |
| Directed Study 15.00 per four-unit course |
| (Also Caution Money and Student Organization Fees as above.) |
| above.) |

M.A., M.Arch. and M.Sc. Courses

(Payable for a full course consisting of Major and Minor

| Tuition | \$10.00 |
|-------------------------|---------|
| Examination | 15.00 |
| Degree | 10.00 |
| Library fee per session | 2.00 |

For Degree of Doctor of Philosophy

| Registration\$ | 10.00 |
|----------------|-------|
| Examination | 15.00 |
| Degree | 75.00 |

^{*}This fee is payable in case the student wishes to rent a locker. One or more students may use the same locker. The total charge for the use of each locker will not exceed \$1.00. Students must provide their own locks and keys.

[†]No caution money deposit is required from students of United Colleges registering for classes at the University. as their own institution has guaranteed payment of any charges that may be made against them.

Summary

The following represents the approximate annual fees of a student for a full course in the Senior Division (Third, Fourth or Fifth years) of Arts and Science:

| , | |
|---|----------|
| Registration | \$ 10.00 |
| Tuition | |
| Examination | 15.00 |
| Laboratory | 5.00 |
| Library | |
| Suggestion: 4th Year Pass or 5th Year Honors, | |
| Degree Fee | 10.00 |
| Student Organizations | |
| Caution Money | |
| *Locker Rent | 1.00 |
| | |
| | \$161.50 |

The following represents the approximate annual fees of a student for a full course in the Junior Division (First or Second years) of Arts and Science:

| Registration | \$ 10.00 |
|-----------------------|----------|
| Tuition | 105.00 |
| Examination | 15.00 |
| Laboratory | 5.00 |
| Library | 2.00 |
| Student Organizations | 8.50 |
| Caution Money | |
| *Locker Rent | 1.00 |
| | 4151 50 |
| | \$151.50 |

The following represents the approximate annual fees of a student for a full course in Pharmacy:

| it for a full course in finalmacy. | |
|------------------------------------|----------|
| Registration | |
| Tuition | 140.00 |
| Examination | 15.00 |
| Laboratory | 5.00 |
| Library | 2.00 |
| Student Organizations | 8.50 |
| Caution Money | 5.00 |
| *Locker Rent | 1.00 |
| | \$186.50 |

REFUNDS

The following fees are not refundable, viz., entrance fees, fees for transfer of standing, fees for late admission, supplemental examination fees, fees for re-reading of examination papers, locker rent, and Student Organization fees. In any adjustment of fees by refund, a sum of \$5.00 is not refundable under any circumstances.

^{*}This fee is payable only in case the student wishes to rent a locker. One or more students may use the same locker. The total charge for the use of each locker will not exceed \$1.00. Students must provide their own locks and keys.

Fees other than the above are refundable *pro rata*, the amount depending upon the proportion of the fee used and subject to the conditions set out below. For the fall term, a refund to be considered, must originate before November 30th of the term for which the fee is charged, and application for such refund must be in the hands of the Registrar of the University for checking and forwarding to the Bursar, on or before December 31st of that term. For the spring term, a refund, to be considered, must originate before March 15th of the term for which the fee is charged, and application for such refund must be in the hands of the Registrar on or before April 15th of that term.

If any student wishes to withdraw from the University or from any part of the course for which such student has registered, and desires a refund of a portion of the fees paid or charged, the student concerned must *immediately* report his or her desire to withdraw, to the Dean of the Faculty, and must present to the Registrar the written consent of the Dean to such withdrawal, together with the date of withdrawal and a recommendation that a refund of a portion of the fees be granted, before the Registrar will issue a refund statement.

SUMMARY OF REGISTRATION

1936-1937

| JUNIOR DIVISION IN ARTS AND SCIENCE: First Year Second Year | | Women 113 166 | Total 341 467 |
|---|------------|---------------------|---------------------|
| Second Teal | | 279 | 808 |
| SENIOR GENERAL DIVISION IN ARTS AND SCIENCE | | | |
| First YearSecond Year | 163 104 | 126 103 | 289 207 |
| | 267 | 229 | 496 |
| Second Year | E: 17 | 4 | 21 |
| Third Year | 20 | 6 | 26 |
| GRADUATE STUDENTS: | 37 | 10 | 47 |
| Preliminary M.A. Courses Master of Arts | 12 | 9 3 | 21 |
| Preliminary M.Sc. Courses | 11 | 1 | 12 |
| Master of Science | 10 | 1 | 11 |
| Doctor of Philosophy | 3 | - | 3 |
| | 40 | 14 | 54 |
| Totals, Arts and Science | 873 | 532 | 1405 |
| PHARMACY (DIPLOMA COURSE): First Year | 23 | 1 | 24 |
| Second Year | 22 | 2 | 24 |
| | 45 | 3 | 40 |
| MEDICINE: | 45 | 3 | 48 |
| First Year | 59 | 4 | 63 |
| Second Year | 41 | 4 | 45 |
| Third YearFourth Year | 52 48 | 5 2 | 57 50 |
| Fifth Year | 42 | 4 | 46 |
| Special Graduate Students | 9 | | 9 |
| | 251 | 19 | 270 |
| Law: First Year | 10 | | 10 |
| Second Year | 18 23 | 1 | 19 23 |
| Third Year | 14 | - | 14 |
| Fourth Year | 9 | 1 | 10 |
| | 64 | -2 | 66 |
| Engineering: - First Year | 52 | | 52 |
| Second Year | 63 | | 63 |
| Third Year (Civil) | 12 | - | 12 |
| Third Year (Electrical) | 26 | | 26 |
| Fourth Year (Civil) Fourth Year (Electrical) | 11 28 | - | 11 28 |
| Tour in Tear (Electricar) | | | |
| | 192 | | 192 |

| Architecture: | Men | Women | Total |
|--|----------|-------|-----------|
| First Year | 2 | 5 | 7 |
| Second YearThird Year | 4 3 | 3 3 | 7 6 |
| Fourth Year | | 2 | 5 |
| | | | |
| | 12 | 13 | 25 |
| AGRICULTURE (DIPLOMA COURSE): | | | |
| First Year | 15 | 1 | 16 |
| Second Year | 7 | | 7 |
| | 22 | 1 | 23 |
| AGRICULTURE (DEGREE COURSE): | | | |
| First Year | 1 | 1 | 16 |
| Second Year | 23 | | 23 |
| Third Year | | | 13 |
| Fourth Year | 16 | - | 16 |
| | 67 | 1 | 68 |
| Home Economics: | | | |
| First Year | | 81 | 81 |
| Second Year | | 68 | 68 |
| Third Year | | 55 | 55 |
| Fourth Year | | 54 | 54 |
| | | 258 | 258 |
| EDUCATION: | | | |
| First Year | 17 | 31 | 48 |
| Second Year | 46 | 9 | 55 |
| Third Year | 10 | 1. | 11 |
| | 73 | 41 | 114 |
| TOTAL REGULAR COURSES | | 870 | 2469 |
| Duplicates | 8 | 1 | 9 |
| NET TOTAL, REGULAR COURSES | 1591 | 869 | 2460 |
| MANITOBA SUMMER SCHOOL, 1936 | | 536 | 982 |
| EXTENSION COURSES: | | | |
| Courses for Pre-Accountancy Students | | | |
| and others | 28 | | 28 |
| Courses for Accountancy Students and | 00 | | 00 |
| others Short Courses in Agriculture | 68 97 | 17 | 68 114 |
| Short Courses in Engineering | 20 | 11 | 20 |
| Institute Courses (English, History, etc.) | 224 | 481 | 705 |
| | 437 | 498 | 935 |
| Totals, All Courses | 2474 | 1903 | 4377 |
| Duplicate (chiefly Summer School and | | | |
| regular session) | 81 | 75 | 156 |
| NET TOTALS | 2393 | 1828 | 4221 |
| | | | |

DEGREES GRANTED IN ARTS AND SCIENCE DIPLOMAS IN PHARMACY

From May 1st, 1936, to April 1st, 1937 All as at May 13th, 1936, unless otherwise noted.

Bachelor of Arts

(General Course)

Ackland, Clifford Nairn

Armstrong, Francis Walker (as Curtis, Allan La Roy at October 7th, 1936) Anderson, John Ogle

Badger, Thomas Mayrs Baldwin, Bernice June Baldwin, Bernice Scott (as at Duncan, Dorothy Lilian Duncan, Ruth Marlowe

Bell, Frances Margaret Belton, George Scott Bergermann, Theodore Herman

Bernstein, Sara Bingeman, Elizabeth Reesor (as

at October 7th, 1936) Bishop, Charles Peyton Black, Gordon Frederick (as at

October 7th, 1936)

October 7th, 1936)
Black, Islay-Ruth Madill
Black, Ralph Fergus
Boon, Thomas Charles Boucher (as at October 7th, 1936)
Bothe, Franklin Edward (as at October 7th, 1936)
Braddell, Eberhard Sylvester Patrick, B.Sc., (E.E.)
Brereton, Donald Cuthbert (as at October 7th, 1936)
Briggs, Albert McCullough
Brown, Isabel Cameron
Bruder, Alice Pearl
Bruder, Mary Louise
Burmaster, Nellie Mae

Cadwell Kathleen Esther

Cadwell, Kathleen Esther Cameron, James Hugh Cawson, Mary Eileen Chipman, Emily Christie Clark, Frances Annabelle Clark, Janet Agnes Claydon Dorothy Helen Claydon, Dorothy Helen Collins, Donald Ralph Coo, Lillian Charlotte Cosgrove, Russell Claire Coté-Richard, M. Thèrése Cowan, James Weir Coyle, William Ambrose

Coyne, Mary Margaret

Delbridge, Lawrence Maitland Dewar, Archibald Stewart Dewar, Neil Allister Diamond, Max Yale

Eakins, Paris Richmond
Earl, Marjorie Agnes
Eibner, Cecilia Mary Pauline
Elliott, Robert William Kenneth
Ellis, Francis Joseph (as at October 7th, 1936)
Emery, Margaret Laura
Erlendson, Marion

Eshoo, Homer

Garrison, Mary Brownley Gilbart, Gordon Winston (as at October 7th, 1936)
Geddes, Luva Myrtle (as at October 7th, 1936)
Goody, Henry
Cottlich Tory

Gottlieb, Josephine Graham, Shirley Claire Granovsky, Lily Green, Alex Hart Gregory, Winnifred Irene

Hamilton, Mary Crichton (as at October 7th, 1936) Harrison, Lionel

Heinzelmann, Helen Voorhees Henry, Bethia Ellen Hermanson, Thelma May Catherine Edith Hryniewiecki, Madeline (as at October 7th, 1936) Jack, Laura Christina Janzen, Helen (as at October 7th, 1936)Johannsson, Sigrun Anna Johns, Kathleen Alexis Johnson, Harold Raymond Jones, Dorothy Jean Juul, Petter Martin Kerby, Catherine Jean Kippen, Robert Stacey Leckie, George Christopher Leighton, Robert James Hughes Quelch, Christopher Stephen (as Lenoff, Dora Loewen, Mary Johanna (as at Rance, Kathleen
October 7th, 1936)
Rea, Florence Jean
Longmire, Elizabeth Frances
Richardson, Kathlee Lowe, Mary Yeoward Macdonald, Margaret Jean MacKelvie, James Archibald (as at November 5th, 1936) MacLennan, David Alexander Marion, Marie Antoinette (as at Ross, John Alexander November 5th, 1936) Mark, Walter William Martin, Freda Marion Martin, Grace Evelyn McAlpine, Aloysius Douglas McBurney, Jean Elizabeth (as at October 7th, 1936) McClung, Eleanor Margaret McCracken, Joseph Alexander McDiarmid, Athol Peter McDonald, Mary Irene McFarlane, Muriel Ruth McGillivray, Ruth Christine McIntyre, Herbert Stanley at December 5th, 1936) McIntyre, Mitchell Joseph McKenty, Elizabeth Marguerite McKenzie, Wilma Christina McMurray, Jane Isabella McNeill, George Wallace McPherson, Allan Randolph McWilliams, Daniel Meighen, Arthur Turnbull Metcalfe, Ross (as at November 5th, 1936)

Morrison, Elizabeth Frances
Murphy, Joseph Edwin (as at Thurston, George Stanley

October 7th 1936) October 7th, 1936)

Neil, Arthur Vernon Neilson, Arthur Nemish, Ernest William Neville, Beatrice Idell Newcombe, Charles Robert Nixon, Kathleen Elizabeth Nixon, Wesley Roberts Burnside Oddstad, John Herman (as at October 7th, 1936) Olesczuk, Leon Rudolph (as at October 7th, 1936) Olson, Kristin Paluk, William Michael Passalis, James Phillips, Mary Elsie Pickard, Herbert Marquis Pickersgill, Walter Ferman at October 7th, 1936) Richardson, Kathleen Edna Riddell, Frances Mary Ring, Elva Irene Rinn, William James Rivoire, Alice Emma Henriette Robinson, John MacGilvray Rowbotham, Dorothy Hattie Schwartz, Tillie Sego, Joseph Emeddie Cletus Semmens, Hellen Jenette Shoults, Arthur Milton Silver, Wilfred Silverman, Pearl Sing, Charles William Smith, Alexander Murray Smith, Anne Smith, Janet Henrietta Solomon, Earl Isadore
Sonley, Alma Helena
(as Sperani, Murray
Steckley, Leslie Josephus (as at December 5th, 1936) Steedman, Iona Stewart, Jessie Muriel Stimpson, Helen Swalwell, Agnes Elizabeth Swyers, Helen Roberta Syme, Nancy Mary Wilson Tapley, John Taylor, Ariana Wyndham Tibbatts, Clarence Eric (as at October 7th, 1936) Tryon, Philip Tremaine Tyndale, Lorne Vincent (as at Koltek, Murray Stanley October 7th, 1936) Tyndale, Zelma Sanforetta Vickers, Mary Vrooman, Agnes Joyce Walker, Marjorie Winnifred Wallace, Graham Bruce Warkentin, Peter Walter (as at October 7th, 1936) Watson, Florence Mary Weber, Ferdinand Joseph Weber, Wilda Adele Weekes, Frances Evelyn Westwood, Frederick Samuel Whiting, Patricia Wiley, Leslie Wilmot (as at October 7th, 1936) Wilson, James Edward Wood, William Arthur (as October 7th, 1936) Wowk, Kazimir George (as at October 7th, 1936) Yanchinski, Waldemir

Bachelor of Arts

(Latin Philosophy)

Burley, Joseph Felix Kenny, Maurice Labossière, Leopold Raymond Létienne, Louis Neyron, Gabriel

Bachelor of Science (General Course)

Axford, Elmer Daniel (as at March 4th, 1937) Badre, Emile Joseph (as at October 7th, 1936) Boroditsky, Louis Brown, Ernest Arthur Brown, Richard Arthur Cornelius Cameron, George Ewen Cooper, Dorothy Marion Coulson, Charles James Cowan, Margaret Isabella Crombie, Gordon Peers Duckworth, Henry Edmison Garrow, Margaret Isobel Harding, George Musgrove Horder, Lilian Jean Horn, Jack Cameron Humphries, Ernest Craig (as at Trott, Harry George

October 7th, 1936) Kent, George Henry Lander, Harold Aaron Livingston, William Rodger Main, William Hunter (as January 7th, 1937) Morrice, William Alexander Olshansky, Herbert Stanley Prodan, Olga Vera Rabkin, Fred Baillie Richardson, Bruce Adams Shafer, Kathleen Doris Sharpe, Lloyd Brereton Sirulnikoff, Harry Morris Smith, Roberta Helen Stewart, David Bradshaw Sullivan, Maurine Rose Sutherland, Marjorie Leslie Temple, Albert John Tomlinson, Lorne Albert Veazey, Clair Thompson Vrooman, Edward Nelson Whitehead, Robert George Durant Williams, Vivian Marian Wilson, Harry David Bruce

Bachelor of Arts (Honors Course)

Balls, Frederic Norman Banning, Florence Elizabeth Benum, Frank Waldemar Bergman, Eric Herbert Clague, Robert Ernest Cohen, Sydney Leon (as at October 7th, 1936) East, Dorothy Mabel Heirsh, Clara Aileen McGavin, Donald Cameron Moore, Kathleen Muir, William Keith Pickersgill, Frank Herbert Dedrick Shelford, Reginald Herbert Steinberg, Abraham

Bachelor of Science (Honors Course)

Allen, Charles Cameron Cochrane, Gordon Robert Dean, William Patterson Evans, James Eric Lloyd Kahanovitch, Moses Elijah Pincock, George Leyland

Master of Arts

Curry, Adele Elizabeth Gaylord, B.A., Toronto, 1934. Major: English Political Parties, 1688-1760. Minor: Canadian History. Thesis "The Idea of Non-Party Government in English Political Development, 1688-1760.

Holmes, John Arthur Lionel, B.A., Manitoba, 1934. Major: Western Canadian History, Minor: Origins of the War. Thesis: A Study of the Pro-vincial Election Returns in Manitoba, 1871-1932.

Moore, Alan Stewart, B.A., Manitoba, 1923. Major: History of English Political Parties, 1688-1714. Minor: Political Science. Thesis: "Daniel Finch, Second Earl of Nottingham—His Political Career, 1688-1714."

Murray, Margaret Mary, B.A., Manitoba, 1926. Major: Eng-lish Literature. Minor: Political Science. Thesis: "Browning's Relation to Painting, Music and Sculpture."

Oleson, Tryggvi Julius, B.A., Manitoba, 1934. Major: Roman History. Minor: Roman Comedy. Thesis: "Tiberius Caesar: Man and Emperor."

Robert, Hugh Ansley, B.A., Manitoba, 1925. Major: English Literature. Minor: English Language. Thesis: "The Ulysses of James Joyce."

Sinclair, Georgina Sutherland, Milton, Nancy Bernice, B.S., B.A., Manitoba, 1931. Major: H.Ec., Manitoba, 1933. Ma-English Literature. Minor: jor: Organic Chemistry. Mi-English Language. Thesis: "The Art of Robert Louis Stevenson.

Master of Science

Brickman, Leo, B.Sc. (Hons.), Moore, Herman William, B.Sc., Manitoba, 1935. Major: Organic Chemistry. Minor: Physical Chemistry. Thesis: "A Study of the Hofmann Breakdown of Acid Amides."

Cayzer, Leonard Stanley, B.Sc. (Agr.), Sydney, 1931. Major: Cereal Chemistry. Minor: Biochemistry. Thesis: "A Comparative Study of World Wheats." (As at April 2nd. 1936).

Fanshaw, Hubert Lorraine, B.Sc. (Hons.), Manitoba, 1934. Major: Physical Chemistry. Minor: Geology. Thesis: "An Investigation of Sulphur Trioxide with reference to its Supposed Heterogeneity." (As at April 2nd, 1936.)

Irwin, Genevieve Duval, B.Sc., Manitoba, 1933. Major: Advanced Parasitology. Minor: Bacteriology. Thesis: "The Precipitation Test in the Differentiation of Meats of Domestic and Game Animals."

Isa, Jacob Meyer, B.S.A., Manitoba, 1930. Major: Physiology of Animal Reproduction. Minor: Photo-Electric Measurements. Thesis: "The Variability of the Areas of Sperm Heads as Related to the Fertility of Bulls."

Lee, Margaret Helen, B.Sc., (Hons.), Manitoba, 1934. Major: Biochemistry. Minor: Organic Chemistry. Thesis: "Calcium and Phosphorous Metabolism in Certain Experimental and Diseased Conditions." (As at April 2nd, 1936.)

jor: Organic Chemistry. Mi-nor: Statistics. Thesis: "The Mi-Reaction of Aromatic Nitro-Compounds with Compounds containing an Active Methylene Group."

Manitoba, 1934. Major: Entomology — Insect Control. Minor: Chemistry — Insecticides. Thesis: "An Intensive Study of the Grasshoppers of Economic Importance at Ar- Stewart-Hay, Ronald Keith, naud, Manitoba, 1935."

Peters, Henry Boyd, B.Sc., Manitoba, 1925; B.A., Manitoba, 1926. Major: Ichthyology. Minor: Bacteriology. Thesis: "The Tolerance of Certain Fresh Water Fishes of a Group of Bactericidal and Parasiticidal Compounds."

Prest, Victor Kent, B.Sc. (Hons.), Manitoba, 1935. Major: Petrology. Minor: Advanced Structural and Economic Geology. Thesis: "An Investigation of the Pre-Cambrian Volcanic Centres of the Flin Flon Area."

Ruttan, George Douglas, B.Sc. Cowton, William (Hons.), Manitoba, 1935. Ma- Crowley, Clifford Thomas jor: Petrology. Minor: And Dandy, Herbert Edwin vanced Structural and Economics. Geology. Thosis: "The Energy County Thosis: "The Property Days of the Property Property Days of the P mic Geology. Thesis: "The Forsyth, Donald James Development of a Gneiss Zone Gibbs, William Willard in the Flin Flon Area."

Manitoba, 1934. Major: Dairy Chemistry. Minor: Dairy Bacteriology. Thesis: "The Source of the Acidity of Fresh Milk."

"The Surface Tension of In- Smith, Clifford Phillip tensively Dried Sulphur Tri- Swanson, Wallace Alexander oxide."

B.Sc. (Hons.), Manitoba, 1934. Major: Advanced Parasitology. Minor: Bacteriology. Thesis: (1) "The Problem of Enzyme Resistance in the Sheep Tapeworm, Moniezia expansa (Rudolphi, 1805.)" (2) "A Note on the Hemolysins of Moniezia expansa."

Diploma in Pharmacy

Arenowsky, Charles Baldwin, John Daniel Campbell, James Douglas (as at October 7th, 1936) Campbell, William Archie Greenberg, Clifford Gilbert Samson, Herbert Stanley, B.Sc., Henderson, William Gilbert Hammill, Harold Erle Clair Krawchyk, Nicholas Leathers, Henry Irvine (as at October 7th, 1936) of the Acidity of Fresh Milk."

Smith, Norman Obed, B.Sc., Mozersky, Isadore Ralph (Hons.), Manitoba, 1935. Major: Physical Chemistry. Minor: Physical Chemistry. Minor: Physics — Thermodynamics of Radiation. Thesis: Ross, Walter Randolph (The Synfage Teories of In Smith Clifford Phillip Uhryniuk, Salomea

UNIVERSITY LIBRARIES

THE FORT GARRY LIBRARIES

The Main Library, also the Architectural, Engineering, and Science Libraries, and a small browsing collection for students of Home Economics, are situated on the Fort Garry site; the Main and Architectural Libraries in the Arts Building, the Engineering and Science Libraries in the Engineering and Science Buildings respectively, and the Home Economics Library in the Administration Building. The Junior Library is on the Broadway site of the University; in the same building there is also a collection of pharmaceutical books kept for reference in the Department of Pharmacy. The Medical Library is located in the Medical Building on the corner of Emily Street and Bannatyne Avenue.

In the Main Library are reference books, and books and periodicals dealing with subjects of general interest, including works on literature, history, philosophy, mathematics and so forth; the latest large acquisition being a valuable collection of Icelandic books very kindly given by Mr. A. B. Olson. This library also receives some Canadian, and a few American, government documents and blue books.

The Architectural Library, in addition to books on architecture, painting and sculpture, contains a very valuable collection of pictures, which, with several hundred volumes on art, was the generous donation, to the University, of the Carnegie Corporation of New York. The Engineering Library consists of books and periodicals of an engineering nature. For the use of its members, the Library of the Association of Professional Engineers of Manitoba has been placed with the Engineering Library in the Engineering Building. The Science Library contains books and periodicals and government documents on science and agriculture, and also a large number of the publications of American universities on these subjects.

Roughly estimated the total number of books and bound periodicals in the University Libraries, exclusive of the Medical Library, approximates 65,200 volumes. These books are available to borrowers not only during the session, but all through the summer. A Package Library, consisting of clippings on various subjects, taken over from the Manitoba Agricultural College, is also available for mailing to correspondents from the rural districts of Manitoba.

THE JUNIOR LIBRARY

In 1935 the Carnegie Corporation made a grant of \$50,000 to the University of Manitoba to establish a library on the Broadway side for the Junior Division students. Space was obtained on the first floor of the Broadway Building for two reading rooms, a stack room and an office; and since September, 1935, the Junior Library has been operating. There are at present about 10,000 volumes in the library, almost all of them new books, purchased within the past two years. The collection is constantly being added to, however, and this summer will be considerably increased within the next few months. The books have been chosen with an eye to the needs of junior students, but a general reference library is being built up gradually, and the collection includes many books on music and the fine arts generally.

The Junior Library may be used and books borrowed from it free of charge by members of the faculties of the University, members of the staff of the affiliated colleges, members of the University Senate, and members of the Board of Governors. Graduates of the University may use and borrow books upon the payment of a fee of \$2.00, which shall entitle them to the privilege of using the library for one year from the date of payment. Persons resident in Manitoba who are engaged in serious study may also join the Junior Library, subject to the approval of the librarian.

During the academic session, the Junior Library is open from Mondays to Fridays from 8.50 a.m. to 5.15 p.m., and from 7 p.m. to 10 p.m.; and Saturdays from 9 a.m. to 1 p.m.

UNIVERSITY OF MANITOBA FOUNDATION

The idea of establishing the University of Manitoba Foundation was first broached in 1930 in discussion by a small group of ways and means of assisting the University. They proceeded to interest in the matter the Alumni Association and the Young Men's Section of the Winnipeg Board of Trade. At a public meeting held in April, 1931, to consider the subject, a Committee was appointed to forward the project and draw up an Act of Incorporation. This Act was passed by the Manitoba Legislature on April 1st, 1932.

The Foundation is controlled by a Board of Trustees consisting of the Chief Justice of the Province, the President of the University, the Mayor of the City of Winnipeg, the Chairman of the Board of Governors of the University, the Minister of Education of the Province, the President of the Alumni Association and nine other persons, five of whom are appointed by the Board of Trustees, and the other four one by each of the following organizations: the Winnipeg Board of Trade, the Winnipeg Trades and Labor Council, the Alumni Association and the Manitoba Students' Union. The present officers are: Chairman, Chief Justice Prendergast; Secretary and Treasurer, Thomas E. D. Boys.

The Foundation provides a medium to seek and receive donations and endowments, to administer such gifts and to apply the income for any purposes or objects connected with the University, such as the provision of scholarships, fellowships, prizes and bursaries or grants for research in any department of University work; the erection and furnishing of buildings; the equipment and maintenance of libraries and laboratories. The amount that has been received up to the present time is not large, but it is increasing; and it is hoped that some distribution can be made shortly, although the amount may be small.

Inquiries as to the purposes of the Foundation or the plans of the Trustees may be addressed to the Secretary-Treasurer at 1100 Paris Building, Winnipeg.

CANADIAN OFFICERS' TRAINING CORPS

University of Manitoba Contingent

After a period of useful service in supplying trained officers and men for the C.E.F. during the Great War, the Manitoba Contingent of the C.O.T.C. was re-organized, and established on a four-company basis, during the autumn of the 1919-20 session.

The C.O.T.C. is a unit of the non-permanent Active Militia, but forms no part of the organization for war, and cannot be called out for active service as such. Its primary object is to provide students eighteen years and over at Universities with a standardized measure of military training with a view to their qualifying for commissions in the country's auxiliary forces, to enable them to give personal service to their country with the least possible interference with their civil careers, to ensure that Militia units have their establishments complete in the junior commissioned ranks, and to build up an adequate reserve of scientifically trained officers who have completed a period of consecutive and systematic military training, on academic lines, of a nature calculated to produce good officers.

In the Manitoba Contingent this training is carried out by officers and N.C.O.'s attached from the Permanent Force of M.D. No. 10, who work in the closer co-operation with the officers and N.C.O.'s of the unit.

To qualify as "efficient" a member of the Contingent must attend 40 parades if in his first year of service, and 25 if in a subsequent year, and must complete the prescribed course of musketry. He may then continue his training during the following year and present himself in March at the examination for Certificate "A" (Lieutenant's). If successful in this examination he may, after a further year's training, take the examination for Certificate "B" (Captain's). These examinations are conducted by the War Office, London, and are the same for all contingents of the O.T.C. throughout the Empire.

Members of the C.O.T.C. are supplied with a free issue of uniforms, and receive pay in proportion to the number of days devoted to training.

Apart from the military and physical training and the musketry instruction, there are special features of a social nature held under the auspices of the O.T.C. such as the annual dinner and dance.

Training is offered in three branches of the Service, the Infantry, the Engineers and the Medical. The contingent has been organized as an Infantry Battalion since 1919, and in 1928 the organization of a Medical Company was authorized.

Since reorganization 266 have qualified for Certificate "A" Infantry and 84 for Certificate "B" Infantry. Since the organization of the Medical Company 66 have qualified for Certificate "A" Medical and 27 for Certificate "B" Medical. Since March 1936, 57 members have written their Certificate "A" and "B" examinations in Infantry, Medical and Engineering.

On the past eleven years the Unit has supplied the following officers to the Permanent Force of Canada:

| Flight Officer C. M. Anderson | R.C.A.F. |
|-------------------------------|---|
| Flight Officer R. Cameron | R.C.A.F. |
| Flight Officer E. H. Evans | R.C.A.F. |
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| Pilot Officer J. L. Henning | R.C.A.F. |
| Capt. H. D. Cluff | R.C.C.S. |
| Capt. K. C. McCullagh | R.C.C.S. |
| Capt. H. A. Young | R.C.C.S. |
| Lieut. W. J. Gooderham | R.C.C.S. |
| | |
| | |
| Lieut, A. H. Millar | |
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| DICCO, II. D. IIIDICI O | |
| | Flight Officer C. M. Anderson Flight Officer R. Cameron Flight Officer E. H. Evans Flight Officer J. H. Ferguson Flight Officer H. M. Kennedy Flight Officer George Kimball Flight Officer W. M. Murray Flight Officer N. B. Peterson Flight Officer R. Slemon Flight Officer R. Slemon Flight Lieut. W. D. Van Vliet Pilot Officer J. L. Henning Capt. H. D. Cluff Capt. K. C. McCullagh Capt. H. A. Young Lieut. W. J. Gooderham Lieut. E. Hulbert Lieut. W. E. Leppard Lieut. A. H. Millar Lieut. E. J. Simmons Lieut. H. D. Wethey Lieut. W. D. Wishart |

The organization of the University Contingent C.O.T.C. during the 1936-37 session was as follows:

| Officer Commanding | Major H. P. Armes |
|---------------------|----------------------------|
| Adjutant | Capt. J. O. Anderson |
| Quartermaster | T/Capt. N. H. Ross |
| Paymaster | Capt. W. F. Riddell |
| Medical Officer | Capt. C. Neilson, C.A.M.C. |
| Asst. Quartermaster | Lieut, N. F. N. Digby |

"A" COMPANY (Arts, Science and St. Paul's)

2nd Lt. M. Smerchanski 2nd Lt. J. S. Reeve 2nd Lt. W. F. Mackey

"B" COMPANY (Engineering)

T/Capt. E. W. Henselwood 2nd Lt. W. M. Smith 2nd Lt. T. P. Dunderdale 2nd Lt. J. E. Gold 2nd Lt. H. A. McBurney "C" COMPANY (Medical)

Major A. M. Davidson, C.A.M.C. Lieut. B. H. G. Curry 2nd Lt. M. A. Ogryzlo 2nd Lt. W. C. Mooney 2nd Lt. C. W. Hall 2nd Lt. H. Levson

"D" COMPANY (St. John's College)

2nd Lt. Andrew Currie 2nd Lt. J. C. Gill 2nd Lt. D. M. Pilley

ALUMNI ASSOCIATION OF THE UNIVERSITY OF MANITOBA, 1936-1937

| Honorary President | E. J. Tarr, K.C., LL.D. |
|---------------------------|-------------------------|
| President | Reginald Hugo |
| Executive Vice-President | Stanley B. Laing |
| Membership Vice-President | Harold D. Barbour |
| Activities Vice-President | Dr. I. O. Fryer |
| Treasurer | Vernon R. Fletcher |
| Secretary | Robert H. Tarr |

Standing Committee Chairmen

| Adiminstration | A. A. McCoubrey |
|----------------|-----------------|
| Membership | |
| Finance | |
| Legislation | James E. Coyne |
| Activities | Irma Malcom |
| Athletics | E. G. Cass |
| Publication | J. Rivoire |
| Publicity | J. C. Trueman |
| Editorial | W. L. Morton |

Directors

| Isabelle Alexander W. M. Benidickson David R. Bews |
|--|
| |
| David R. Bews |
| David IV. Devid |
| Verna Blevins |
| Mrs. D. Bulgin |
| Mrs. H. V. Copley |
| Rev. A. D'Eschambault |
| P. D. Evans |
| Marion H. Ferguson |
| R. E. Guy |

| | Elizabeth Haig |
|---|------------------------|
| | Mrs. A. W. Hogg |
| | Dr. T. E. Holland |
| | Gordon M. Hutt |
| | A. D. Longman |
| | Dr. L. S. Macklin |
| | Nancy B. Milton |
| , | Andrew Moore |
| | Dr. J. R. W. Nicholson |
| | David Owens |
| | Charland Prudhomme |
| | |

J. Racine
L. S. Reycraft
James Richard
Beulah A. Ross
Dr. H. H. Saunderson
Marion Schofield
Mitchell Sharpe
Eleanor Tennant
W. A. Trott
H. E. Wood

STUDENT ORGANIZATIONS

UNIVERSITY OF MANITOBA STUDENTS' UNION COUNCIL, 1937-1938

Executive

| President | | W. Ronald D. Turner |
|-------------------|--------------------|----------------------------------|
| | | Jean M. Warren |
| Secretary | | William T. Cave |
| Chairman, Financ | ce Committee | Gordon E. Trueman |
| Treasurer | | R. Howell Evans |
| Asst. Treasurer | | Roderick O. Hunter |
| | Faculty Repres | sentatives |
| Accountancy | Senior | |
| | Junior | |
| Agriculture | | Harvey Scott |
| | | Murray Roberts |
| Architecture | | Victor Boyd |
| | | Frank D. Newton |
| Arts | | To be elected |
| | | Ernest Sirluck |
| Education | One to be elected. | |
| Engineering | | Gerald A. Martin |
| | Junior | William Dutton |
| Home Economics | | Grace C. Moore Ruth Calder |
| Law | Senior | To be elected |
| | Junior | E. Ryerson Preudhomme |
| Medicine | | Gordon E. Trueman |
| | Junior | John L. Silversides |
| Pharmacy | | Patrick H. Murphy |
| | Junior | To be elected |
| Science | | William T. Cave |
| | Junior | George G. Acheson |
| St. John's | Senior | Arthur J. B. Hough |
| | | William Cross |
| St. Paul's (Men) | Senior | Mark F. Reardon William J. Casey |
| | | |
| St. Paul's (Women |) Senior | Patricia O'Connor |
| | | J. Ernestine de Goesbriand |
| United Colleges | Senior | William Paterson |
| | | Hugh C. McFadden |
| University Senate | | Dr. W. J. Spence |

Committee Chairmen

| (To be appointed) |
|--------------------|
| Andrew Currie |
| Harold D. Orloff |
| (To be appointed) |
| Molly Rogers |
| Marion H. Herriot |
| Charles Mackenzie |
| (To be appointed) |
| John H. Hamlin |
| (To be appointed) |
| Janet M. Storey |
| Harold B. Stringer |
| |

U.M.S.U. WOMEN'S ASSOCIATION

The U.M.S.U. Women's Association Council is a sub-committee of the U.M.S.U. Its objective is to promote and supervise the general activities and interests of the women students of the University.

The Council consists of the Lady Sticks of each faculty, a Junior Representative from each faculty, the Dean of Women of the University and an Alumnae Representative.

Council for 1937-1938

| Honorary President | Mrs. S. E. Smith |
|------------------------|-----------------------|
| President | Janet M. Storey |
| Vice-President | Joan M. Harland |
| Secretary-Treasurer | Agnes D. Leggat |
| Dean of Women | Mrs. U. N. Macdonnell |
| Alumnae Representative | Miss Jean M. Warren |

Lady Sticks

| Arts | P. Elizabeth Dean |
|--------------------|-----------------------|
| Architecture | Joan M. Harland |
| Education | (To be elected) |
| Home Economics | Margaret E. Brown |
| Law | Elizabeth F. Morrison |
| Medicine | Margaret M. Connor |
| St. John's College | Agnes D. Leggat |
| Science | R. Phyllis Ferg |
| United Colleges | Janet M. Storey |

Junior Representatives

| Arts | Shirley M. Johnston |
|----------------------------|---------------------|
| Home Economics | Katherine U. Hall |
| St. John's College | Gladys M. Hillman |
| St. Paul's College (Women) | Alice M. O'Donnell |
| Science | Susan E. Thomas |
| United Colleges | Margaret M. Riddell |

STUDENT CHRISTIAN MOVEMENT COUNCIL, 1937-1938

| President | Margaret E. Brown |
|-------------------|--------------------|
| Secretary | Eva R. Allan |
| Treasurer | Wilfrid B. Book |
| Chairman, Finance | Russell Richardson |
| Social Convenor | Norma I. Dow |

Executive—Thomas M. Badger, Arthur G. Elcombe, Donald H. MacKay, Andrew M. Swan, Margaret Thirlwell.

SENIOR ARTS COUNCIL, 1937-1938

| Senior Stick | Campbell Lawrence |
|------------------------------------|---------------------|
| Lady Stick | P. Elizabeth Dean |
| Vice-Stick | |
| Treasurer | |
| Secretary | Frances Aikins |
| Social Chairman | David A. Ritchie |
| President of Dramatics | Edith J. Haig |
| President of Debating | Herbert A. Swift |
| President of Men's Athletics | Gordon Bracken |
| President of Women's Athletics | Evangeline Howe |
| President of Third Year | |
| President of Fourth Year | |
| President of Men's Club | John G. Trimble |
| Senior U.M.S.U. Representative | |
| Junior U.M.S.U. Representative | Ernest T. Sirluck |
| Junior President (ex officio) | |
| Junior Vice-President (ex officio) | Shirley M. Johnston |

JUNIOR ARTS COUNCIL, 1937-1938

| President | Ross J. Culley |
|----------------|-----------------------|
| Vice-President | Shirley M. Johnston |
| Treasurer | J. E. Reesor Bingeman |

| M. Elizabeth Paterson |
|--------------------------------|
| J. R. Clark Livingstone |
| D. Brenda Crawford |
| H. Brent Prendergast |
| Leonard D. McMurray |
| Janet L. Rossini |
| Lorne G. Main |
| Douglas M. MacGregor |
| (ex officio) Ernest T. Sirluck |
| Campbell Lawrence |
| P. Elizabeth Dean |
| (To be elected) |
| |

SENIOR ARTS WOMEN'S COUNCIL, 1937-1938

| Lady Stick | P. Elizabeth Dean |
|-------------------------------|-------------------|
| Vice-President | Maxine Steinkopf |
| Secretary | Frances Aikins |
| Senior Co-ed Representative | Agnes G. Smith |
| Vice-President of Fourth Year | (To be elected) |
| Vice-President of Third Year | (To be elected) |
| President of Athletics | Evangeline Howe |

JUNIOR ARTS WOMEN'S EXECUTIVE, 1937-1938

| President | Shirley M. Johnston |
|-------------------------------|-----------------------|
| Secretary | M. Elizabeth Paterson |
| Junior Co-ed Representative | Mary L. Macoomb |
| Vice-President of Second Year | Allison Chown |
| Vice-President of First Year | (To be elected) |
| President of Athletics | Janet L. Rossini |
| Lady Stick (ex officio) | P. Elizabeth Dean |

SCIENCE STUDENTS' ASSOCIATION COUNCIL, 1937-1938

| Honorary President | Professor H. P. Armes |
|--------------------------------|-----------------------|
| Senior Stick | Walter Paylor |
| Lady Stick | R. Phyllis Ferg |
| Secretary | J. Rodger Livingstone |
| Treasurer | George J. Olstead |
| Senior U.M.S.U. Representative | William T. Cave |
| Junior U.M.S.U. Representative | George G. Acheson |
| Convener of Social Committee | J. Gordon McPhee |
| Convener of Debating Committee | Charles H. Fletcher |

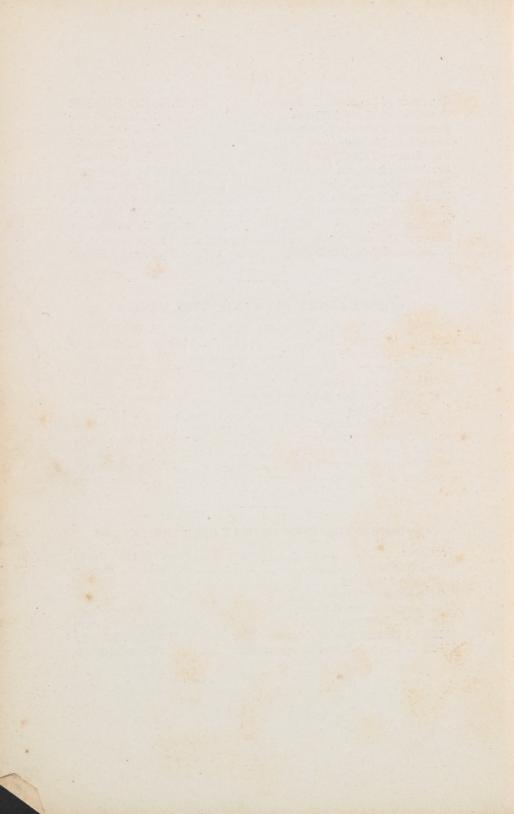
| Convener of Dramatic Committee | H. W. Dudley Beresford |
|---------------------------------|------------------------|
| President of Men's Athletics | Richard Flower |
| President of Women's Athletics | Nancy K. Green |
| President of Fourth Year | Sidney J. Buckler |
| President of Third Year | (To be appointed) |
| President of Second Year | (To be appointed) |
| President Men's Club | Lorne A. Smith |
| Year Book Representative | |
| Manitoban Representative | Herbert Nitikman |
| Quartermaster | (To be appointed) |
| Editor of Question Mark | (To be appointed) |
| President of Scientific Society | Gordon C. Laidlaw |

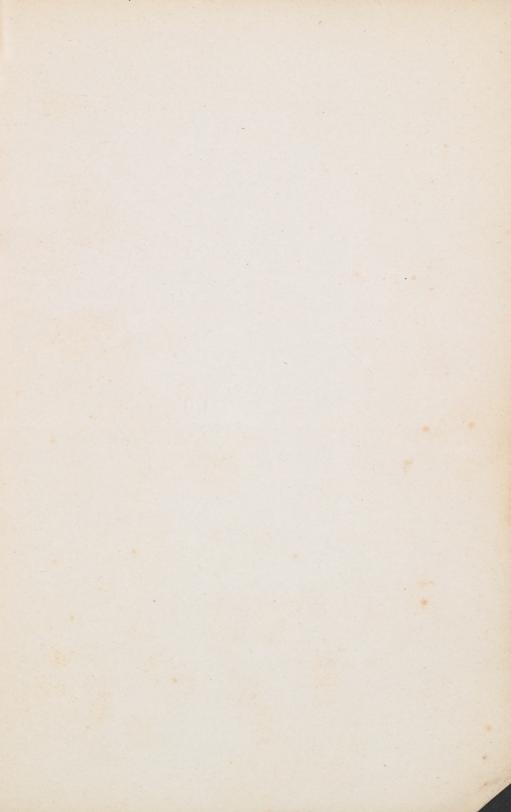
SCIENCE LADIES' CLUB EXECUTIVE, 1937-1938

| President | R. Phyllis Ferg |
|------------------------------------|---------------------|
| Vice-President | Miriam G. Kennedy |
| Secretary-Treasurer | (To be appointed) |
| Social Chairman | Frances C. Robinson |
| Assistant Social Chairman | Eira A. Charles |
| U.M.S.U.W.A. Junior Representative | Susan E. Thomas |
| Junior Lady Stick | Joan O'Brien |
| Fourth Year Representative | (To be appointed) |
| Third Year Representative | (To be appointed) |
| Second Year Representative | (To be appointed) |
| First Year Representative | (To be appointed) |
| President of Women's Athletics | Nancy Green |

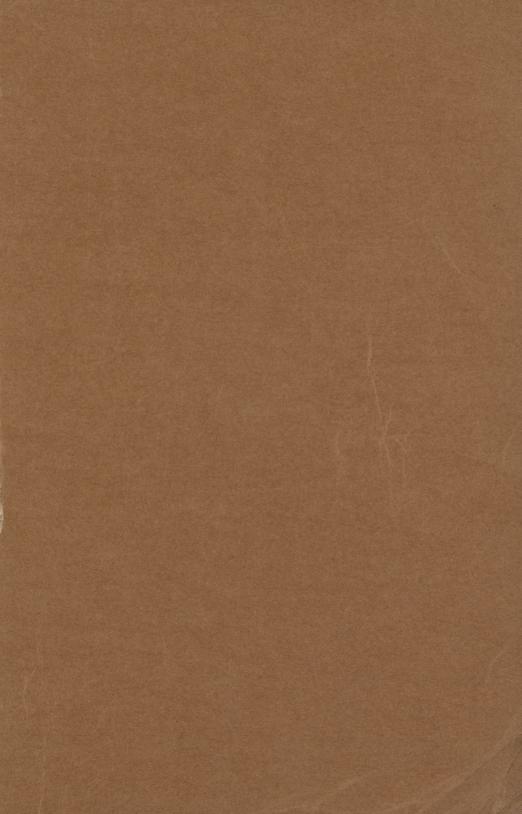
PHARMACY STUDENTS' SOCIETY OFFICERS, 1937-1938

| President | Arthur W. Speed |
|--|-------------------|
| Vice-President | |
| Secretary-Treasurer | James A. Marshall |
| Sports Representative | |
| Manitoban Representative | John F. Robertson |
| Year Book Representative | James A. Marshall |
| U.M.S.U. Council Senior Representative | Harold P. Murphy |
| U.M.S.U. Council Junior Representative | (To be elected) |









In addition to the Calendar herein, the University of Manitoba publishes the following Calendars, copies of which may be had upon request from the Registrar:

- 1. Medical Calendar.
- 2. Engineering and Architecture Calendar.
- 3. Agriculture and Home Economics Calendar.
- 4. Education Calendar.

A Syllabus of Music Studies is also published.

Manitoba Law School also publishes a Calendar, copies of which may be obtained from the University Registrar.